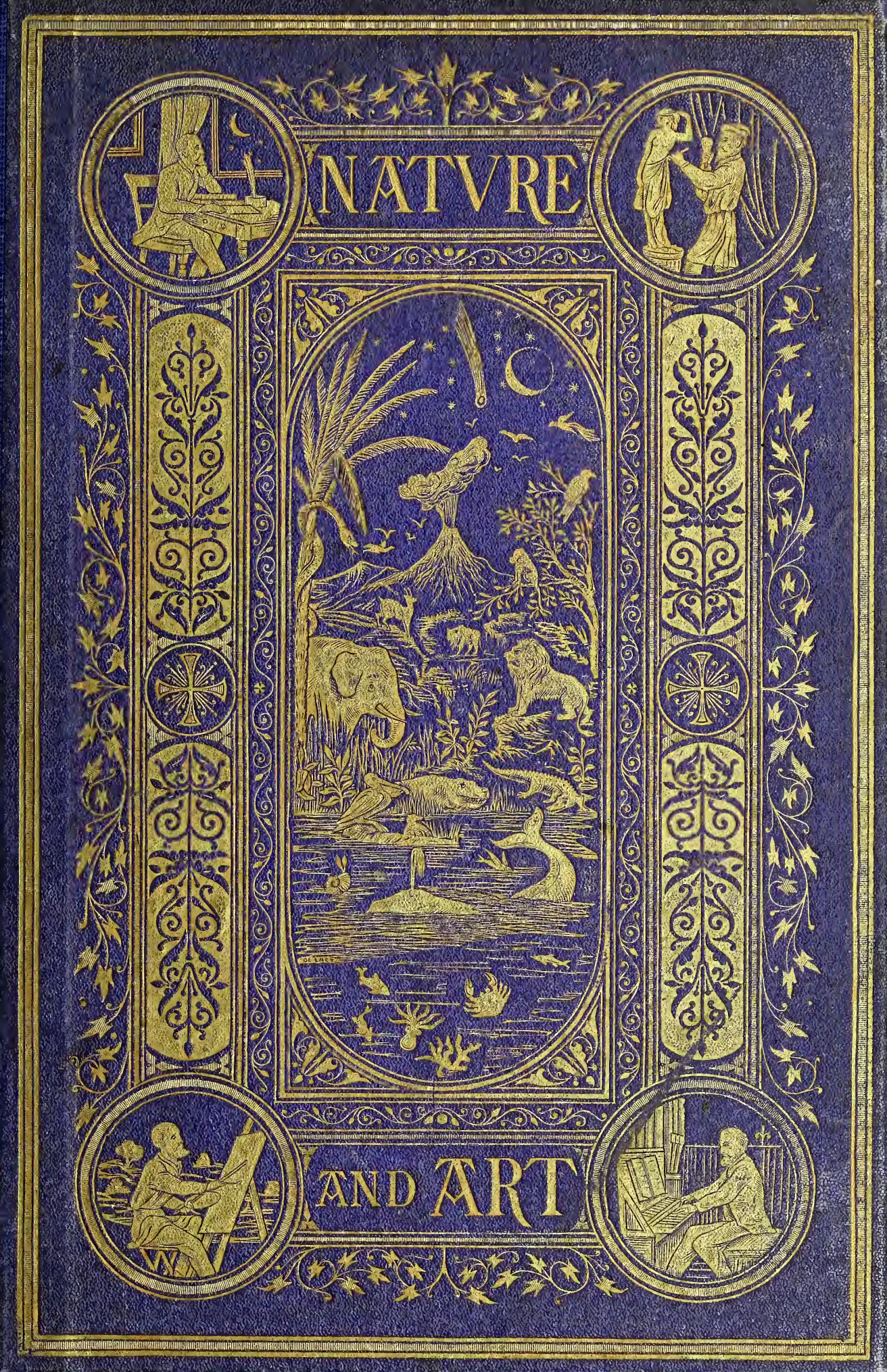
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NATURE AND ART

June 1, 1866.]

INTRODUCTORY.

TRUE it is that the pride, the misgivings, the hopes and the fears, attending the cradle of humanity are found also about the birth of a new periodical. It is true, too, that though the judicious looker-on knows too well the accidents that literature, like flesh, inherits, to hazard predictions of long life or beauty; sanguine parents and nurses will ever claim for the new-born, against all comers, the certain attainment of those advantages. This is our present office, and we take the time-honoured privilege of drawing the kindly reader's attention to our infant's present claims, and stating our views as to its future.

Our treatment of NATURE and of ART will not be after the fashion of the Metaphysicians, nor shall we indulge in mere scientific detail. Our object is to draw our reader's attention to that which is interesting in Nature and admirable in Art. But our intentions will be best understood from our performances, and we present at once a specimen of our work. We need hardly say that as our Magazine progresses our means of adding to its value will proportionally increase. Our illustrations in Chromo- and Photo-lithography, which speak for themselves, must be at once appreciated, and we shall make use of them for the double purpose of decorating our text and exhibiting the advance of those branches of art.

Seeing that the LITERATURE, SCIENCE, ART, ANTIQUITY, and AMUSEMENT of this and of other countries have each and all our sympathy, we purpose that each, as occasion offers, shall find a place in our columns. Yielding, for instance, to the joint summons of the antique and the amusing, we have prominently placed a paper on "Ancient Greek and Roman Fishermen," considering it an example—if Cotton and Davey were not examples enough—of how grave learning and love of the angle are by no means incompatible; and we are bold enough to predict that it will please alike the scholar and the sportsman. An enthusiastic naturalist who for a time has laid down the trenchant blade in favour of the pen, has given us the first of several graphic sketches in Crim Tartary, which will surprise some who have principally associated the word Crimea with the horrors of war and all but Arctic desolation. From another friend we are glad to welcome botanical notes; while consideration for our fair readers compelled us to find space for an authentic letter from Paris on certain novelties in fashionable fine-art manufacture.

The intimation that we should welcome contributions from correspondents on foreign service, brought us offers which ensure much interesting matter for future numbers. That such would be the case was certain, seeing that in every corner of the world may be found Englishmen whom amusement and love of adventure take to nature's recesses, and whom ample leisure tempts to record their impressions for the use of such as sit at home at ease. While through the ranges and plains of India, and the dispersed settlements of the Isles—through all lands, indeed—there are military officers afoot whose pleasure as well as profession it is to record phenomena, and whose records are too often interred for ever in the field-book and the pigeon-hole, may we not reasonably look for manuscripts of value if we but offer the facility of the press? Governments, learned societies, and even trades, are all sending skilled emissaries to each quarter of the globe in quest of scientific and practical knowledge. The successors of Humboldt, Schomburgk, and Waterton, are ever tracking nature in forest and on stream; while arts are pioneered into all lands by the daring followers of the Stephensons and the Brunels. All of them work for us. There are none of their achievements and results that we may not press into our service if only space permit us so widely to extend our range of subjects.

We have already arranged for ample and diversified foreign correspondence, reports, reviews, and illustrations, all by able hands. Since the issue of our Prospectus we have received such valuable suggestions and tenders of assistance, that we are even disposed to apprehend an *embarras de richesse*. Commending, then, to the reader the varied contents of our First Number, we may fairly promise that its successors shall at least equal it in attractiveness.

ANCIENT GREEK AND ROMAN FIELD SPORTS.

I.—ANCIENT GREEK AND ROMAN FISHERMEN.

By the Rev. W. Houghton, M.A., F.L.S.

THE love of the chase and capture of wild animals is, no doubt, inherent in man's nature. Apart from the utility of many kinds, either as articles of food or as the means of supplying clothing, there is, probably, in all nations, however barbarous, an æsthetic appreciation of sport for its own sake. The native of Australia is doubtless highly gratified and pleased with himself when a successful throw of the boomerang has brought to the ground some swiftly-flying bird or jumping kangaroo; the Dyak of Borneo feels a thrill of delight as the dart from his sumpitan, or blow-pipe, pierces some delicate dove or bright-coloured parroquet; the Indians of the Amazon district of South America, who with wonderful dexterity pierce with hurled javelin the carapace of some unfortunate turtle as it swims submerged in the lake, are keenly alive to the sport, independently of the baser associations that attach themselves to the name of turtle. The reason of this is, that the successful employment of skill brings with it its own peculiar gratification. In the chase of savage animals there is an additional element of enjoyment; for here not only skill is requisite, but courage and presence of mind; and when the aid of the dog is needed, and his sagacity and wonderful powers of scent are exhibited, the pleasures of the chase become enhanced a hundred fold. Still, though one cannot doubt that the chase of wild animals is attended with a degree of pleasure in the sport itself apart from that derived from the value of the prey captured, even amongst barbarous nations, yet probably a thorough appreciation of field sports is to be found only amongst civilized people. One reason of this is, that they are better qualified to admire the successful adaptation of means to an end; and secondly, because from their more prosperous condition they are not to any extent dependent upon the game they kill. Hence the sportsmen of the civilized world can afford to give the animal pursued some fair play or "law," supposing the nature of the prey is entitled to it. But, in the opinion of an uncivilized people, the idea of allowing the quarry the smallest chance of escape would be considered as the mark of the most consummate folly. To slip two couples of greyhounds upon a hare the instant she starts from her form, or designedly to let the dogs "chop" a fox in the cover, would deservedly be thought a sin of great magnitude in the eyes of an English sportsman. But fair play is no jewel in the *ars venatoria* of a rude nation. "Catch who catch can" is the motto by which they are guided. With regard to the Field Sports of the Ancient Greeks and Romans, there is abundant evidence to show that they were held in great esteem. From a knowledge of the character of these people, it is only natural to anticipate an attachment to the sports of the field. Devotedly fond as they were of all manly exercises, it was not likely that the pleasures of the chase should hold any but a prominent place in their pursuits. The names of Xenophon, Oppian, and Arrian amongst the Greeks, and those of Gratian and Nemesian amongst the Latins, are conspicuous as writers of treatises on the sports of the field. "The invention of the art of hunting," says Xenophon, "is from the Gods,—for hunting and dogs were the care of Apollo and Diana, who rewarded and honoured Chiron with a knowledge of them on account of his regard for justice. He having received the gift was delighted with it, and had as disciples in this and other honourable pursuits, Cephalus, Æsculapius, Melanion, Nestor, Amphiaraus, Peleus, Telamon, Meleager, Theseus, Hippolytus, Palamedes, Ulysses, Menestheus, Diomede, Castor, Pollux, Machaon, Podalirius, Antilochus, Æneas, Achilles, each of whom in his own day received honour from the Gods." After recording some of the merits of these heroes, Xenophon adds, "these men became such as they were from the instruction derived from Chiron,—men whom the good still love, and the bad envy. If misfortunes befel any city or king in Greece, these men were the deliverers; if any quarrel or war arose between the whole of Greece and the barbarians, the Greeks secured the victory by such men as these, and Greece became invincible. I advise the young therefore not to despise hunting, or any other training, for by such means men become good soldiers, and excel in other accomplishments, by which they are necessarily led to think, speak, and act rightly." Ancient philosophers and poets, such as Aristotle, Plato, Cicero, and Horace, acknowledge the utility of a training in the sports of the field; the bard of Venusia admirably shows the connection between the hunting field and the field of battle in the following lines:—

> "Romanis solemne viris opus, utile famæ,
> Vitæque, et membris; præsertim cum valeas, et
> Vel cursu superare canem, vel viribus aprum,
> Possis. Adde, virilia quod speciosius arma
> Non est qui tractet (scis quo clamore coronæ
> Prælia sustineas campestria) denique sævam
> Militiam puer, et Cantabrica bella tulisti." *

The ordinary field sports pursued by the ancients were hare hunting, deer and wild boar hunting, coursing, fowling, and fishing. On some of these sports I hope to speak on a future occasion: at present I would say a few words on Fishing.

Fishing was principally carried on in the sea, though river and lake fishing were not unknown.

* *Epist.* i. 18.

That the art was practised with much success and love of the sport is evident from the Halieutics of Oppian, the only Greek poem now extant on this subject; but we learn from Athenæus that several other writers had written treatises or poems upon fishing, such as Cæcilius, Numenius, Pancrates, Posidonius, Seleucus, Leonidas, and Agathocles. All these writers' works have unfortunately perished. The methods employed to take the scaly creatures of the sea and river were various, and in many respects similar to those now adopted by the disciples of Walton and Cotton. The ancients netted, angled with rod and line, or hook and line, trolled, set baited wicker traps, and occasionally practised the art of fly-fishing after a rather rude fashion. Various kinds of nets were used,—Oppian mentions several. The most common nets were the *seine* or *sean* (σαγήνη) and the casting-net (ἀμφίβληστρον). The materials of the nets were either flax (*linum*) —hence *linum* sometimes denotes a net, as in *Virg. Georg.* i. 142,—

"Pelagoque alius trahit humida lina,"

or hemp. The sean net was probably not dissimilar to the one now used by modern fishermen; there were corks or pieces of wood at the top of the net, and pieces of lead at the bottom. To these Ovid refers—

"Adspicis ut summa cortex levis innatet unda
Cum grave nexa simul retia mergat onus."
(*Trist.* III. iv. 11.)

The following passage from Oppian clearly explains the use of the ancient seine or circle-net:—

"The silent fishers in the calm profound
With circling net a spacious plot surround,
Whilst others in the midst with flatted oars
The wavy surface lash; old ocean roars
Murm'ring with frothy rage beneath the blow,
And rumbles to remotest deeps below.
The dreadful din alarms the tim'rous fry;
They fondly to the net's protection fly.
Fools! From unbodying sounds to death they run,
And flying but o'ertake the fate they shun.
But when returning seines the shores ascend,
And from the struggling ropes the fishers bend,
Imprudent fears the trembling shock begets,
Closer they press and hug the treach'rous nets."

The *amphiblêstron* or casting-net was, there is much reason to believe, similar to the modern casting-net. But as to the precise mode in which it was gathered up and thrown, there is no clear evidence to show. A fisherman with net in hand, just about to make his cast, was one of the figures on the shield of Hercules. His attitude is described as follows:—"And on the land there stood * a fisherman on the look-out, and he held in his hands a casting-net for fish, being like to a man about to hurl it from him." The term to denote "the cast" was βόλος, from βάλλω, "to throw." The Romans used their casting-net, it is probable, in a manner not dissimilar to the one in use amongst the Greeks; and they had the same term to signify "the cast," *bolus*. The net itself was "jaculum rete," or "jaculum;" it was also called "funda." There is a very amusing passage in Plautus, where Dinarchus compares the dangers of love and its allurements, to fish caught in a casting-net:—

"Quasi in piscinam rete qui jaculum parat;
Quando abiit rete pessum, tum adducit sinum.
Sin jecit rete, piscis ne effugiat, cavet
Dum hic dum illuc reti eos impedit
Pisces, usque adeò donixum eduxit foras.
Iditem est amator." (*Truc.* act i. sc. 1.)

"Just like a man who throws his casting-net into a fish-pond; when the net sinks to the bottom he contracts its folds, and when he has made his throw he takes care that the fish do not escape, whilst the net entangles them in all directions in its meshes till he land them safely; so is the lover."

From this passage it is pretty clear that the *jaculum*, like the ἀμφίβληστρον, must have been nearly identical in form and manner of use with our own casting-net. It is impossible to form any conjecture as to the form of several other nets mentioned by Oppian, and in most cases by him alone; what were the γρῖφοι, or the γάγγαμα, or the round ὑποχαί, or the καλύμματα, or the πέζαι, or the σφαιρῶναι, or the σκόλια πάναγρα, we have no means of discovering. All we can gather is that they were nets of different construction used by sea-fishermen of Ancient Greece.*

Angling was a very common mode of fishing. Sometimes a rod and line were used; at other times the line was wound round the hand, and let down from a boat or rock; to this cord, either a single large and well-weighted bait (καθέτης) was attached, as a lure for some large kind of fish, or a series of baited hooks was fastened along a portion of it, as in the long-line fishing of our own coasts. The lines were made of hemp, horsehair, or of spartos, and were of great strength, as was requisite to catch the huge conger-eel, whose flavour always threw an old Greek into ecstasies of delight. The hooks were large, and flattened at the shaft end; single or double, sometimes two-barbed, and fixed back to back like our pike or eel hooks. Dr. Badham saw an abundant assortment of ancient fish-hooks in the Museum of Naples: they were disinterred from Pompeii, and vary extremely in form, size, and mode of adjustment: they were made "of two different metals; some, like our own, of hardened iron (*nucleus ferri*); others, as we read in Oppian, of bronze." Some of the larger kinds of hooks were weighted with lead shaped into cylindrical lumps, which, from a certain rude resemblance to dolphins, were called *delphini*. The bait, being attached to this leaded hook, was thrown into the sea, and drawn up and down, to and fro, like our system of trolling.

"He holds the labrax, and beneath his head
Adjusts with care an oblong shape of lead,

* In the English translation of Elton (Hesiod, *Shield of Hercules*, 294):—

"On the crag a *fisher sat*
Observant: in his grasp he held a net
Like one that, poising, rises to tho throw."

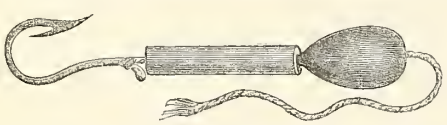
Surely the word ἧστο means simply "was set" or "stationed," not "did *sit*." Sitting is not the attitude for a man "on the look-out," or for one about to throw a casting-net.

* Many words relating to fishing may be found in the *Onomasticon* of Pollux, but they are seldom explained.

Named from its form a dolphin; plumb'd with this
The bait shoots headlong through the blue abyss.
The bright deeoy a living creature seems,
As now on this side, now on that, it gleams."

In order to prevent the fish from biting off the hook, a tubular piece of horn sometimes covered the line for the space of a few inches from its junction with the hook: as gimp was unknown to the early followers of the gentle art, this was a wise and effectual precaution. To this Homer clearly alludes when, speaking of Iris plunging into the dark sea, he says—"She sank to the bottom like a leaden weight, which, placed down upon the wild-bull's horn, sinks quickly, bearing destruction to the raw-devouring fishes." *

It is difficult to understand why this passage should have caused perplexity to some commentators and translators. Thus, it has been supposed that the piece of horn spoken of was not fixed to the fishing-line, but to the side of the boat, and that the line was run down this horn to prevent wear by friction: the traveller Clarke says that modern Greek fishermen adopt this plan. But a passage in the "Odyssey" (xii. 251—254), which I will not here cite, is clearly opposed to such an explanation, for it there appears that "the horn was let down into the sea," *i. e.*, of course, the whole fishing-line—the part being, by a common figure, put for the whole. Lord Derby, in his recent translation, adopts the very singular notion that the piece of lead (*μολυβδαίνη*) was "incased in the wild-bull's horn." But neither can the Greek allow of such an interpretation, nor can any reason be assigned for inclosing the leaden weight in horn. Suidas tells



us that the fishermen "prepared a tube of horn, which they placed upon the fishing-line to prevent the fish biting off the hook." (See also "Dammii Lex," s. v. *κέρας*.) The relative positions of the hook, horn, and lead, there can be little doubt, were in the order in which we have enumerated them.

We cannot doubt but that the ancient Greek and Roman fishermen were keenly alive to the pleasures of a bite. As salmon were not known in the rivers of Greece and Italy, the ancients were of course strangers to the "thrill of joy, fear, and surprise induced by the first tug of a salmon," which some devoted disciples of fly-fishing have maintained to be "the most exquisite sensation of which this mortal frame is susceptible."† But still the long pull and the strong pull of a mighty conger-eel were no doubt thoroughly appreciated by the Greek and Roman angler. Oppian has well described the excitement of having a lively fish at the end of the line:—

"A bite, hurrah! the lengthening line extends,
Above the tugging fish the arch'd reed bends;
He struggles hard, and noble sport will yield
My liege, ere wearied out he quits the field.
See how he swims up, down, and now athwart
The rapid stream—now pausing as in thought;
And now you force him from the azure deep
He mounts, he bends, and with resilient leap
Bounds into air! there see the dangler twirl,
Convulsive start, hang, curl, again uncurl,
Caper once more like young Terpischore
In giddy gyres, above the sounding sea,
Till near'd, you seize the prize with steady wrist,
And grasp at last the bright funambulist."*

Traps or weels, made of wicker-work or rushes, appear to have been in frequent use; these were called *cyrti* (*κῦρτοι*) and *labyrinthi* (*λαβύρινθοι*), but the former term was in more general use. The *cyrtus* was open and narrow at one end, and closed and wide at the other. The bait was placed at the bottom of the trap, which was then cast into the water. From the description that Oppian (*Halieut.* iii. 341—356) has given of the *cyrtus*, it would appear that the narrow end was provided with a door, which was made to close when the weel was full of fish. The *labyrinthus*, as the name imports, was constructed so as to entangle the fish in its mazes. The Roman *nassa* was probably identical in form with the Greek *κύρτος*. Œlian thought this kind of sport hardly becoming a gentleman. "Fishing with the *cyrtus*," he says, "is a very deceitful mode of taking fish, dreadfully treacherous, and, in my opinion, not at all the proper thing for a gentleman." The last-named Greek writer says there are four kinds of fishing, namely, with nets, with the pole (-net), with weels, and with hooks. Fishing with nets, he says, is very lucrative, and reminds a person of the capture of a number of prisoners of war after an army has been defeated. He says that a variety of articles are required for this mode of fishing, such as ropes made of the spartos plant,† white and black lines, cork, lead, pitch, thongs, horn, a six-oared boat, a windlass, and other things the names of which are very difficult to make out. Fishing with the pole (*κόντωσις*, *διακόντωσις*) is recommended as a manly exercise, and requires a strong fisherman. It is not easy to see what this method of fishing was: the requisites for it, we are told, are "a strong pole made of olive, cords or ropes of the spartos (whether netted or not we are not informed), torches of resinous pine-wood, a small boat, eager oarsmen, and strong hands." Fishing with hooks, Œlian says, is the wisest kind of fishing, and most suited to a gentleman. In this art you require horse-hair (white, black, red, or grey), straight hog-bristles, brass, lead, lines of spartos, feathers (especially white, black, or variegated). Some fishermen use red and purple wool, also corks and pieces of wood (like the modern

* Ἡ δὲ μολυβδαίνη ἰκέλη, ἐς βυσσὸν ὄρουσεν,
Ἥτε κατ' ἀγραύλοιο βοὸς κέρας, ἐμβεβαυῖα
Ἔρχεται ὠμηστῆσιν ἐπ' ἰχθύσι κῆρα φέρουσα·
(*Il.* xxiv. 80—82.)

† See Mr. Russell's excellent book on *The Salmon*. Edmonston and Douglas. 1864.

* *Prose Halieutics*, p. 3.

† The spartos is a grass (*Stipa tenacissima*, Lin.) abundant in Spain, where it is called *esparto*; it is much used in the manufacture of ropes, cords, nets, mats, baskets, &c., and even recently of paper.

E. Adey Del

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trimmers ?), tall reeds, slip-knots ? (*βρόχοι*), rods of cornel wood, horn, &c. &c.

The mention of red and purple wool reminds us of another passage in Œlian, from which it is clear that even the art of fly-fishing was practised by some of the people of Greece. The passage is very interesting, as containing, probably, the earliest extant allusion to artificial-fly fishing. We translate the passage in full.*

"There is a river called Astræus, flowing midway between Berea and Thessalonica, in which are produced certain spotted fish (*ἰχθύες τὴν χρόαν κατάστικτοι*)—you must go to the Macedonians for their name—whose food consists of insects which fly about the river. These insects are dissimilar to all other kinds found elsewhere ; they are unlike wasps, nor would one naturally compare them with the flies called ephemera, nor do they resemble bees, but they possess characters common to all these creatures ; for they are as impudent as flies, as large as the anthedon, of the same colour as wasps, and they buzz like bees. The natives call this insect the hippurus. As these flies float on the top of the water in pursuit of their food, they attract the notice of the fish which swim upon them. When a fish spies one of these insects on the top of the water, it swims quietly underneath it, taking care not to agitate the surface lest it should scare away the prey. So approaching it, as it were under its shadow, it opens its mouth and gulps it down, just as a wolf seizes a sheep from the flock, or an eagle a goose from the yard ; and having done this, it swims away beneath the ripple. The fishermen are aware of all this ; but they do not use these flies for bait, because handling would destroy their natural colour, injure the wings, and spoil them as lure. On this account the insect is in ill-repute with the fishermen, who cannot make use of it. They manage to circumvent the fish, however, by the following clever piscatorial device : they cover a hook with purple wool, and upon this they fasten two feathers of a waxy colour which grow underneath a cock's wattles ; they have a reed six feet long, and a fishing-line of about the same length ; they drop this bait upon the water, and the fish, being attracted by the colour, becomes extremely excited (*οἰστρούμενος*) and proceeds to meet it, anticipating, from its beautiful appearance, a most delicious repast ; but, as with extended mouth it seizes the prey, it is held by the hook, and, being captured, meets with a very sorry entertainment." †

Fish—*i. e.* the prime kinds—are and have long been, in our own country, dear articles of diet. The same was the case at Athens with regard to those which were held in most esteem. The insolence of the retail dealers, their dishonesty, shameless conduct, and avariciousness, were proverbial. The following amusing account of an ancient fishmonger watering his stale fish to make them look like fresh ones, is quoted by Athenæus from "The Purple" of Xenarchus :—

" Poets are nonsense ; for they never say
A single thing that's new. But all they do
Is to clothe old ideas in language new ;
Turning the same things o'er and o'er again,
And upside down. But as to fishmongers,
They're an inventive race, and yield to none
In shameless conduct. For as modern laws
Forbid them now to water their stale fish,
Some fellow, hated by the gods, beholding
His fish quite dry, picks with his mates a quarrel,
And blows are interchanged. Then when one thinks
He's had enough, he falls and seems to faint,
And lies like any corpse among his baskets.
Some one calls out for water ; and his partner
Catches a pail, and throws it o'er his friend
So as to sprinkle all his fish, and make
The world believe them newly caught and fresh." *

I conclude this paper with Dr. Chapman's spirited Translation of the 21st Idyll of Theocritus, which gives a most graphic description of the life of ancient Greek fishermen.

THE FISHERMEN.

ASPHALION AND A COMRADE.

The nurse of industry and arts is want ;
Care breaks the labourer's sleep, my Diophant !
And should sweet slumber o'er his eyelids creep,
Dark cares stand over him and startle sleep.

Two fishers old lay in their wattled shed,
Close to the wicker on one sea-moss† bed ;
Near them the tools wherewith they plied their craft,
The basket, rush-trap, line and reedy shaft,
Weed-tangled baits, a drag-net with its drops,
Hooks, cord, two oars, an old boat fixt on props,
Their rush-mat clothes and caps propt either head ;
These were their implements by which they fed,
And this was all their wealth. They were not richer
By so much as a pipkin or a pitcher.
All else seemed vanity : they could not mend
Their poverty—which was their only friend.
They had no neighbours ; but upon the shore
The sea soft murmured at their cottage-door.
The chariot of the moon was midway only,
When thoughts of toil awoke those fishers lonely :
And shaking sleep off they began to sing.

ASPHALION.

The summer-nights are short, when Zeus the king
Makes the days long, some say—and lie. This night
I've seen a world of dreams, nor yet 'tis light.
What's all this ? am I wrong ? or say I truly ?
And can we have a long, long night in July ?

FRIEND.

Do you the summer blame ? The seasons change,
Nor willingly transgress their wonted range.
From care that frightens sleep much longer seems
The weary night.

ASPHALION.

Can you interpret dreams ?
I've seen a bright one which I will declare,
That you my visions as my toil may share.
To whom should you in mother-wit defer ?
And quick wit is best dream-interpreter.
We've leisure and to spare. What can one do,
Lying awake on leaves, as I and you,
Without a lamp ? They say the town-hall ever
Has burning lights—its booty fails it never.

FRIEND.

Well : let us have your vision of the night.

ASPHALION.

When yester-even I slept, outwearied quite
With the sea-toil, not over-fed, for our
Commons, you know, were short at feeding hour,
I saw myself upon a rock, where I
Sat watching for the fish—so eagerly !
And from the reed the tripping bait did shake,
Till a fat fellow took it—no mistake.
('Twas natural like that I should dream of fish,
As hounds of meat upon a greasy dish).
He hugged the hook, and then his blood did flow ;
His plunges bent my reed like any bow ;
I stretched both arms, and had a pretty bout
To take, with hook so weak, a fish so stout.

* From a passage in Martial (Lib. v. Ep. xviii.) it is also certain that the Romans used flies as baits, but whether they were natural or artificial does not appear.

† *Nat. Anim.* lib. xv. c. 1.

* Athenæus, *Deipnosoph.* i. 357. Yonge's Translation.

† *Βρύον ἄνον*, "dry sea-weed ;" in all probability, the common *Fucus vesiculosus*. *Βρύον* is from *βρύω*, "to swell."

I gently warned him of the wound he bore.
"Ha! will you prick me? you'll be pricked much more."*
But when he struggled not, I drew him in.
The contest then I saw myself did win.
I landed him, a fish compact of gold!
But then, a sudden fear my mind did hold,
Lest King Poseidon made it his delight,
Or it was Amphitrite's favourite.
I loosed him gently from the hook, for fear
It from his mouth some precious gold might tear,
And with my line I safely towed him home,†
And swore that I on sea no more would roam;
But ever after would remain on land,
And there my gold, like any king, command.
At this I woke. Your wits, good friend, awaken,
For much I fear to break the oath I've taken.

FRIEND.

Fear not; you swore not, saw not with your eyes
The fish you saw; for visions all are lies.
But now no longer slumber: up, awake,
And for a false a real vision take.
Hunt for the foodful fish that is, not seems,
For fear you starve amid your golden dreams.

* The words supposed to be put into the mouth of the fish, which is represented as threatening the fisherman with punishment from the offended god. Asphalion just reminded the fish, by a motion of his hand on the rod, that he was hooked. "Ha! will you prick me? Poseidon will wound you more severely, if you injure one of his favourites!"

† Καὶ τὸν μὲν πειστῆρσι κατῆγον ἐπ' ἠπείροιο.

Dr. Chapman's translation of this line implies that the fisherman is dragging the fish ashore after he has already had it in his hand, and taken the hook from its mouth. Various readings have been proposed by the critics in order to get rid of the difficulty. It seems exceedingly doubtful whether πειστήρ is synonymous with πεῖσμα, "a cable." If I may offer an opinion, I would suggest that πειστῆρσι be rendered "by persuasion" (*persuaders, persuading acts*). The difficulty that perplexed Asphalion was how he should land a large fish with weak tackle. He tells us how he accomplished it. He did not pull violently against the struggling fish, but kept a light hold of him, and so gradually subdued him, till he was able to drag him without resistance to the shore. "Thus it was," he adds, "that by persuasion I secured him." Asphalion did just what any modern angler would do under ths circumstances.

A RAMBLE AMONG THE CRIM TARTARS BEYOND THE SEAT OF WAR.

By W. B. LORD, Royal Artillery.

THE mists of early morning still hang like battle smoke about the summits of the lower hills and rugged gorges, just lifting here and there above the rocks and peaks, which look like islands in a sea of fleecy wool. Clear and pure is the air this bright May morning, as it comes sweeping across the plains in sudden playful gusts, making the long green grasses wave and ripple like an emerald lake. Countless flowers strew our way. The sea-green orchis, the purple tare, and the blue larkspur grow luxuriantly, and are ruthlessly trodden under foot by our mules and horses, which are literally wading through the tangled verdure covering a small plain at the entrance to the valley of Baidar, appropriately called the "Taurica Arcadia." A brawling brook hurries by our path, which here narrows into little more than a mere track; leaps in a pigmy cataract, between two huge boulders; and then ripples on its way to the Black Sea. Up we go by hanging bushes, and past fallen rocks, in wooded dells; where the giant peonies grow as in some enchanter's garden. The servants gather the great pink and scarlet flowers, like silken cricket-balls; deck the animals' heads with some of them, and pelt each other with the rest, like schoolboys out for a holiday. Onward still, amongst thickets of oak and wild plum; by tangled clumps of thorn, and stunted juniper bushes. Beneath these, in marked contrast to their sombre hue, lay hundreds of pure white land shells (*Bulimus tauricus*) tenantless and bleached in the past winter snows: whilst every here and there, on the level spots, are piles or mounds of earth, and stems of grass, showing where the souslik (*Spermophilus citillus*) dwells; and from every ledge and flat rock darts a tiny lizard, with sheen of antique bronze, and eyes like gems. We are wending our way through the hunting-grounds of Prince Woronzow; in the distance sparkle the gilt vanes and domes of his hunting-lodge; away to the left looms, in cloud-capped majesty, the "Ychatir-Dagh," rearing his cragged summit 5,000 feet above the fruitful plain below. Onward, still onward, and a flock of wild pigeons rises on clapping wing from the margin of a pool, fed by a clear spring which comes babbling coolly from amongst the rocks. A gnarled and crooked tree, grey with moss and lichen, stands hard by the well; and on the topmost branches sit two old crows, equally grey, who croak defiantly, take two or three short hops, spread their wide wings, and flap off. So—the water being good, the tree dry, and grass abundant in the hollow—"halt" is the word, and we will encamp, for night is not far distant. My little canvas home is soon raised; the mules and horses picketed; and the throne of the crows is converted into a crackling cheerful fire, which leaps and flashes in the gathering twilight joyously. An inquisitive bat wheels in shadowy flight round the top of the white tent, wondering, no doubt, what he should live to see next. Savoury odours and hissing sounds arise from the neighbourhood of the fire, highly suggestive of supper, which appears in due course, and is as duly discussed. Night is soon down on us, and all is stillness and tranquillity, save when an ill-disposed, querulous old owl or two, in the wood above, quaver forth their discontent at things in general and the scarcity and leanness of mice in particular; or sometimes

the sharp tinkle of a picket-chain or the short "crop-crop" of our hungry animals, breaks the charm, when we rouse up suddenly, and inquire, "What?" As nobody replies, we drive out several large moths of suicidal temperament, who will wheel and dash into our lamp in a manner most exasperating, button the flaps of the tent, and drop off to sleep again. Like the redoubtable "Johnny Cope," we must be "far awa' in the morning;" so we make an early start of it, and tramp gaily along the road leading to the Tartar village of Baidar; passing, every here and there, one of those combinations of sticks, thongs, and fiendish noises, known as an "Aroba." If "evil spirits dread a creaking wheel," as says an Eastern proverb, imps and spirits would think twice before they fixed on this part of the world's surface as an abiding-place. Tartar men — in sheepskin coats, wool caps, and brigand-like foot-gear—march along, goad in hand, administering sundry raps and pokes to their lazy, stupid old bullocks, whose tails are tied fast to bowed sticks like overgrown mole-traps. Tartar women and children, of generally "bundley" and woolly appearance, squat in the lumbering, jolting machine, amid whole piles of small quaint-looking scythes for grass-cutting, amongst which one would hardly care to be upset. In the village sit and lounge, pipe in mouth, a number of stereotyped editions of our "Aroba" acquaintances, all equally sheep-skinny and "bundley." Shops are here too much after the fashion of those from which the "London 'Prentice" was wont to shout, "What do ye lack?" when old London Bridge was standing.

Miscellaneous indeed are the treasures exposed on these primitive shop-fronts. Here are boots of brimstone hue, sharp of toe and of fire-bucket pattern; saddles, the very sight of which would make any untravelled horse kick all his four shoes off; bridles to match, and whips like fly-flappers. Here are strings of capsicum pods, like little nuggets of red coral. Huge leather bottles of oil, bags of linseed, and festoons of brown shining onions. We invest capital in onions, and go on our route rejoicing, and are soon amongst the woods again, winding our way up the hill-side, where sparkling rivulets bubbling past afford our four-footed companions an opportunity of cooling their hoofs and noses at the same time. Still upwards, and just before us stands a massive stone arch like a castle gateway without the castle. This crowns the highest point of the "Pass of Phoros;" and a strong compact structure it is, with guard-rooms built in the thickness of its masonry. Guards there are none; but we have a strong suspicion that something far worse may be met with by the heedless intruder, so we keep outside. Do we fear to enter? what are we afraid of? Wild beasts, ogres, snakes? No, simply fleas; of these we have a wholesome dread, based on a hard experience, which wanderings in many lands have only served to confirm and establish. Indian, Egyptian, Turkish, Spanish, and Tartar fleas have we combated manfully on their own point of vantage, suffering always more or less in the encounter; but of all the determined, unflinching, piratical, bull-dog antagonists to be found in the world, your true Russian military flea is the one to be most scrupulously avoided. We therefore pass beneath the shadow of the grim portal into the broad bright sunlight, and stand amazed and entranced at the marvellously beautiful scene, unrolled, as it were, like some vast enchanted picture beneath us. Far away, losing itself at last in the dim blue distance, lies, like a silver lake, the tideless sea. Stretching away to the left is a rich fringe of wood and natural meadow, backed up by giant cliffs and riven peaks of wild fantastic grandeur; whilst on high, floating like specks in the clear air, are two eagles—veritable "Russian eagles," nowise related to the wretched conventional "split crow" in which the Czar of all the Muscovites delighteth. Downwards now leads our path, and a devious one it is, needing a sure foot where loose stones and broken ledges encumber the zigzag track which winds amongst thickets of wild fruit-trees, thorns, and briars, for a good mile before the level of the sea is reached. Through tangled brake, and amongst huge riven masses of porphyry, shooting up here and there to a thousand feet in height, we proceed to the opening of a sheltered and secluded valley, at the head of, and above which, lie the ruins of ancient "Laspi," a town of the old Greek period. Here, shielded by the surrounding mountains in secure tranquillity, nestles the modern village of the same name, and it would be hard to find a spot more singularly blessed, both in climate and natural fertility. No nipping frost or cold bleak wintry winds reign here. All is perpetual summer; and when the wide far-off steppe is clothed in its mantle of white, and the whirling sleet whistles through the waving reeds, this favoured nook becomes a refuge for the game of the plains. The bustards and hares then betake themselves to the rich feeding-grounds here abounding, until the yellow crocuses and pink hyacinths once more deck the valley and hill-side. "Winter is gone," and with it depart the greater portion of the furred and feathered refugees back to their old haunts on the wide rolling steppe. A few sparingly scattered Tartar cottages, some ruins, trailing vines, fallen walls, and neglected orchards we pass on our road to the coast line, along which we travel gaily, the pigmy wavelets of the tideless sea rippling up almost to the fringe of grass upon its margin. Presently we find ourselves wending our way amongst piles and crumbling masses of black shifting schist, backed up by stupendous crags towering up like the walls of some vast fortress. Who shall say that rich stores of rock oil are not buried far beneath, as in many a less promising locality? We, however, do not "prospect," having quite enough to do to guard against a false step on this treacherous path, which in certain places would bring our journey to a speedy termination. A shelving ledge, barely wide enough for the mules and horses to travel on,

forms the only route through this perilous tract, where whole villages are sometimes overwhelmed by huge descending landslips. Professor Pallas thus describes one of these catastrophes :—

"On the 10th of February, 1786, the surface of the earth about the deep glens before mentioned, and in another still further to the eastward, began to burst and to exhibit cracks or clefts; so that on the same day, the brook which had hitherto turned two small mills constructed by the native Tartars entirely disappeared. Two days afterwards, the soil having become entirely disengaged, and the frightened inhabitants of the adjacent village having removed their cattle, carried off their effects, and abandoned their habitations, the whole tract between the hollows above described, from the lofty banks of rock by the sea-shore, fell in, about midnight, with a dreadful noise; and this sinking continued till the 28th of February; so as to occasion a terrific abyss, from ten to twenty fathoms deep, in which only a large parallel ridge of hard rock and two smaller crests remained projecting at the bottom. The ground thus fallen extends about a mile and a half in length and six hundred yards in breadth. In proportion as one part of the steep declivity was detached from the rock, the whole mass pressed downwards, and the strand was removed further into the sea to a distance of from one hundred to two hundred yards."

Across one of the chasms caused by the shifting beds of shale, the Tartars had constructed a bridge of the most rickety and insecure description. Some account of the passage of this we will give in our next communication.

(*To be continued.*)

THE NEW VEGETABLE.

(*Raphanus caudatus.*)

By J. R. Jackson, Royal Museum, Kew.

THE newly-introduced radish, which has attracted the attention of horticulturists so much of late, is certainly a novelty, inasmuch as the edible portion of the plant is the seed-vessel, and not the root. The common radish, in its numerous varieties, is such an exceedingly popular salad-plant, that we are scarcely prepared to look to this genus for new economic products or floral novelties. When we consider the many varieties of radish known in this country, from the long and tapering red-root to the white turnip-radish, we might, in some measure, be prepared for a wider development of nature's laws in tropical countries. Of the genus *Raphanus* there are but six species, and two of these are British, namely, the wild radish or jointed charlock (*R. raphanistrum*), and the sea-radish (*R. maritimus*).

From whence our garden-radish came is unknown. It has been thought to be a native of China; but some varieties of *R. raphanistrum* have been gathered on the shores of the Mediterranean, and have characters almost sufficient to establish a link between the two, and the possibility of the one being a cultivated form of the other. The garden-radish, however, was very extensively grown both by the Egyptians and Greeks in ancient times, and has long been in cultivation in this country. We read that radishes appeared at the table of Henry VIII., about 1532, and the author of "The Book of Simples," written in 1562, says: "Of radish-roots there be no small store growing about the famous Citye of London. They be more plentifull than profytable, and more noysome than nowrishinge to manne's nature." Old Gerard seems to have been acquainted with four varieties so early as 1597.

The effects of climatic changes and rich soil, together with careful cultivation, have considerably increased the number of varieties; but the result has been a greater or more perfect development of the root. This is not the case with the *Raphanus caudatus;* the pods are the edible as well as the most singular part of the plant, for they are said to grow to a length of three or four feet. The seeds of this radish, which have been recently advertised for sale at the very high price of one guinea for seven seeds, were first received at the Edinburgh Botanic Garden, in April, 1865, and the pods were exhibited in July of the same year. The plant is said to be a native of India, whence the seeds were derived. They germinate, and the plants grow very rapidly; those at Edinburgh flowering seven weeks after sowing. The petals are whitish, tipped with purple, and traversed by purple veins, or streaks; each plant has from eighteen to twenty seed-vessels, some of them two feet nine inches long, and varying in colour from green to purple, or a mixture of the two. The plants grow well in the open air; indeed, they are said to do better even than under glass, those grown at Edinburgh and by Mr. Bull, of Chelsea, flowering much more profusely out of doors, than those kept in a greenhouse or stove. The rapidity of the growth of the pod must be something remarkable, if, as alleged, it grows three inches in one night. These long fruits hang upon the plant; some quite straight, while others are twisted and curled in all directions, giving the plant a very peculiar appearance. The greatest twisting or contortion of the seed-vessels occurs when the seeds are mostly in the upper portion of the siliqua. Now the economic value of this plant lies entirely in these long seed-vessels: they are said to be of a much more delicate flavour than a common esculent radish-root, with, perhaps, a little more pungency. They can be eaten raw, in their young state, as an ordinary radish, or in salads, or as pickle; indeed, if we are to believe the advertisements, these seed-vessels are to be "regarded as one of the most useful vegetables that have been introduced for many years."

Now the question that arises regarding this edible-podded radish is, whether it is a true and distinct species. Some eight years since, seeds were received in this country of a radish, called the Madras radish. It is said, however, to be a native of Java, but cultivated to some extent in India, especially in the vicinity of Benares. This plant was also grown at the Edinburgh Botanic Garden; but, instead of pods three or four feet long, it only produced them of eight or nine inches. This radish was subsequently called the rat-tail radish, of which many varieties are known, and though the pods produced at Edinburgh were not more than nine inches in length, it would appear that, by carefully sowing seed from the long attenuate-podded plants, they can be grown much longer. The pods of the Madras, or rat-tail radish, are referred to as being edible, though they never came into great repute. The question now to be decided is, whether these two plants are identical, and to be considered rather as varieties than as species. Professor Balfour says, the two plants he has at Edinburgh still hold good to their distinctive characters. Those who consider them quite distinct have given the name of snake-radish to the longest podded one, to distinguish it from the rat-tail.

J. R. J.

We are informed that on the plant arriving at maturity, the pods of *Raphanus C.* are often so numerous and heavy, as to render a substantial support to the plant necessary, in order to prevent its branches from being broken. When served as a cooked vegetable, it should be treated after the manner of asparagus, which in taste it is said much to resemble. The flavour of early green peas which is attributed to it, will no doubt by epicures be deemed no disqualification or loss of claim to their favourable consideration.—Ed.

THE MACKEREL.

(Fam. *Scomberidæ*.)

By W. B. Lord, Royal Artillery.

IT would be difficult to find a fish more exquisite in form and colour, or more important in a commercial point of view, than our blue-and-silver friend who is popularly supposed to have arrived at the height of perfection as an article of food in the month of June. By some very precise folk, in days gone by, his admission to polite society was considered out of the question until green gooseberries made their appearance.

The frequenters of Billingsgate have souls above such antique prejudices. Let us then consider the fish from an entirely modern, prosaic, and practical point of view.

Mackerel, to be fully appreciated, should be eaten perfectly fresh. The sooner they are cooked after having, with stiff protruding fins, quick shuddering flutter, and changing ultramarine tints, gasped their short lives away, the better. The cause of the poisonous qualities which mackerel, as well as many other kinds of fish, especially those found in tropical regions, at times possess (whether in a fresh or stale condition), is a question opening up a field for investigation to those who have the will and leisure to enter upon it; and such of the readers of Nature and Art as have already directed their attention to the matter would confer a favour by communicating the result of their researches.

There are many points connected with the movements of the mackerel, its value, and mode of capture, which may not prove uninteresting. Certain localities are visited by the shoals only at particular periods of the year, whilst others are never deserted by them. Whether from the abundance of suitable food found at such times, or from some of the other causes which influence the migrations of fish, it is hard to say; but experience shows us that on the coasts of Ireland mackerel are taken nearly all the year round. They are rarely very abundant on the coast of Cornwall—although never entirely absent from it—much before March. A little later they visit the coast of Devonshire, appearing to approach the land as the season advances. At Lowestoft and Yarmouth the fishing season is still later, and is at its height during the months of May and June, whilst, in the Frith of Forth, June and July are the months when they usually appear. In the Orkneys few fish are taken until the last week in July or the first in August.

The mackerel family have an extended range, and are found most abundant in warmer climes than ours. The Sea of Marmora and the Bosphorus at times literally swarm with them, and it is extremely picturesque and exciting to see the light and graceful "caiques" dancing like bubbles over the clear blue sea, as, propelled by their lusty crews, they shoot here and there amongst the circling nets. Meantime, the cunning old cormorants, undismayed by the bustle and splashing water, ply their occupation most diligently. As they grow audacious from long-continued impunity, they make a sudden raid over the corks into the thick of the struggling, fluttering fry. The fishermen shout, and by dint of admonitory pokes, liberally administered with the oar blades, the greedy, long-necked throng are ignominiously expelled, and retire beyond the nets, gobbling down at leisure their ill-gotten plunder. Some idea of the abundance of fish to be found in this part of the world, and of the immunity from persecution enjoyed by these birds, may be formed by watching the countless thousands of them which at times pass, in apparently endless lines, between the Sea of Marmora and the Black Sea. I have watched them for hours without seeing any apparent diminution in their passing hosts. Vast numbers of mackerel also frequent the coasts of the island of St. Helena, where immense quantities can be captured. I have taken them with the hook and line, until literally tired of hauling up and unhooking; baiting with a little strip of salt pork-rind, and throwing biscuit-dust overboard as an attraction. These fish, although of excellent flavour, are rarely more than seven or eight inches long, and are much like the *shiners*, or young mackerel, found abundantly on our coasts during the summer months; whilst in British waters, from fourteen to sixteen inches in length, and two pounds in weight, is not an unusual size. There are instances on record of mackerel measuring over twenty inches long, and heavy in proportion; but these are rare. There is a fish known amongst fishermen as the Spanish mackerel (*Scomber colias*). It is occasionally taken of considerable size; but is easily distinguished from the true mackerel, and is in little repute as an article of food, being dry and of indifferent flavour.

It is both curious and interesting to trace, from old records, how fluctuating and uncertain the visits of the migratory shoals have been, and how—like the rich claim of the gold-digger—the sea at times pours forth, most lavishly, the glittering treasures that have been long and laboriously sought in vain. Thus we are told that, in the month of May, 1807, the crew of a fishing-boat from Brighton put out to sea, fell in with the fish, went to work with a will, caught a boat-load, and sold them in Billingsgate for forty guineas per hundred: just seven shillings per fish, counting *six score* to the hundred.

In the month of June, in the same year, the fish appear to have made heavy reprisals. For the shoals were so great that a Brighton boat had all her nets, to the value of £60, sunk and lost by the weight of fish entangled in the meshes. Again, we are informed that, on the 30th of June, 1821, sixteen boats' crews of Lowestoft realized between them, for their catch of mackerel, £5,252; and the fishermen on the Suffolk coast earned, in that year, not less than £14,000. It is also recorded that on a Sunday, in the month of March, 1833, four Hastings boats captured, and safely landed, 10,800 fish; and on the next day, two boats secured 7,000. Again, early in February, 1834, one boat's crew from Hastings cleared £100 by one night's fishing; and in six days, from the 19th to the 24th of June inclusive, 131,700 mackerel were sent to the London market. In 1808, on the Kentish coast, sixty fish were sold for a shilling.

Much importance appears in past times to have been attached to the sale of mackerel in London, as we find that a law was passed, in the year 1698, legalizing their being vended by a "cry" on a Sunday: which custom, as we know, still continues.

There are several modes by which the capture of the mackerel is effected. Seines, or long nets furnished with corks at the top, and leads at the bottom, are dexterously carried, by fast boats, round the advancing shoal of fish, which is enclosed as within a "pound." The ends of the net are now secured, and the fish either taken from within the enclosure with a smaller net, or drawn to the surface in the "bunts," or bags formed in the larger seines, when the leaping, struggling fish are dipped up literally by flasketfuls (by men stationed on the gunwale of the boat for the purpose) and thrown into a compartment provided for their reception. Great numbers are at times taken in ground seines, or nets, which, although somewhat like those above described, are smaller, and so arranged as to be dragged to the beach with their contents. "Trammel" and "drift" nets may be compared to curtains suspended in mid-water, and are moored securely in the places selected for them by heavy stones fastened to their ends. In them the heedless fish, not perceiving the treacherous web, dart their heads, become hopelessly entangled, and are ultimately strangled in the meshes.

Hook-fishing, too, lends its aid in thinning the rainbow throng. As a matter of sport and pastime, few pursuits, I think, are more thoroughly enjoyable than "whiffing" for mackerel, and the following quotation will show that others are much of the same way of thinking:—

"It was evident the bay was full of mackerel; in every

direction, as far as the eye could range, gulls and puffins were collected, and, to judge from their activity and clamour, there appeared ample enjoyment for them amongst the fry beneath. We immediately bore away from the place where the birds were most numerously congregated, and the lines were scarcely overboard when we found ourselves in the centre of a shoal of mackerel. The hooker, however, had too much way. We lowered the foresail, double-reefed the mainsail, and then went steadily to work. Directed by the movements of the birds, we followed the mackerel. Tacking and wearing the boat occasionally, when we found we had overrun the shoal, for two hours we killed these beautiful fish as fast as the baits could be renewed and the lines hauled in, and when we left off fishing, actually wearied with sport, we found we had taken above 500 lbs. There is not, on sea or river, always excepting angling for salmon, any sport comparable to this delightful amusement. Full of life and bustle, everything about it is animated and exhilarating. A brisk breeze, a fair sky, the boat in quick and constant motion, all is calculated to interest and excite. He who has experienced the glorious sensations of sailing on the Western Ocean, a bright autumnal sky above, a deep green lucid swell around, a steady breeze, and as much of it as the hooker can stand up to, will estimate the exquisite enjoyment our morning's mackerel fishing afforded." *

Excellent sport is to be at times obtained by rowing or sculling the boat into the thick of a shoal, and fishing with the white artificial fly.

The mackerel fishing on our coasts, as practised in the various ways here set forth, gives employment to a great number of the fishing community, properly so called, and others indirectly concerned in the sorting, curing, packing, transport, and sale of the fish. Immediately on their being landed from the boats, large tubs of clear sea-water are prepared, into which they are thrown. When washed, they are wiped, allowed to drain, placed in small hampers or "pads," covered with paper, sewn down, directed, and despatched to where the "*iron horse*" waits the signal which shall send him screaming, rattling, and snorting through the wild dark night and misty morning, bearing his giant load of food to the hungry throngs of vast insatiable London.

* "Wild Sports of the West of Ireland."

THE PARIS SOCIÉTÉ D'ACCLIMATATION.

THIS energetic society has recently held its tenth annual meeting. M. Drouyn de Lhuys, its president, delivered the opening address, in which he gave an interesting account of the progress of the cultivation of the vine from the earliest historical period to the present time. The president referred to the painted records of the Egyptians, in which we still see the arched trellises loaded with grapes, the wine-makers treading out the fruit, and the ranges of goodly amphoræ in the cellars; he touched on the mention of wine in Holy Writ, on the famous vineyards of Israel, of Carmel, of Hermon, of Lebanon, of Sorek, and of Eshcol in the environs of Hebron. The wine of Sorek, he said, was still highly esteemed, and the vineyards of Eshcol still yield fruit which recalls to mind the marvellous grapes of the Promised Land which the messengers of Joshua carried with so much labour; and he illustrated this by reference to a bunch of grapes grown in England on a vine from Syria. This bunch measured two feet in length by more than four feet in circumference, and weighed nineteen pounds. This phenomenal bunch of grapes was presented by the Duke of Portland to the Marquis of Rockingham. Homer spoke of the Thracian wine, which was so strong that it would bear twenty times its own volume of water; Pliny bore witness to its excellence and its strength; and travellers still are eloquent upon the subject of the grapes of Thrace. In the middle ages, the vineyards of Lesbos, Chios, and Cyprus were held in the highest estimation, and the Crusaders brought cuttings of the vines of those and other famous spots when they returned into France and Germany.

The Romans were slow to learn the art of cultivating the vine, and Pliny recounts a witty saying of Cinéas, the ambassador of Pyrrhus, who finding the wine offered to him at Rome extremely acid, and making allusion to the bad habit of training the vines on high trees, said—"It was just to hang the mother of such wine on such an elevated cross." Pliny says that the wines of the Italian peninsula had no reputation till the sixth century after the foundation of Rome. Wine was so scarce in Greece in the time when Lucullus was a child, that it was only served once at the end of the most sumptuous banquets; and when the celebrated proconsul returned home from Asia, he distributed a hundred thousand measures of his favourite beverage, in order that all the citizens should partake his enjoyment. The conquest of Greece had, amongst other effects, that of introducing the vines of Chios and of Thasos into Italy. Pliny enumerates eighty kinds of wine, of which two-thirds were Italian; he merely mentions those of Spain, and exhibits little esteem for those of Gaul, although the vine was introduced there long before by the Phocians. Strabo says that the vineyards of Gaul were very productive, though not extensive. At the time of the invasion of Cæsar the culture of the vine in France, or rather Gaul, was confined to the Cevennes; under Childebert it had extended to the Loire; and Charlemagne caused it to be spread over the hills of the Pays de Vaud. M. Drouyn de Lhuys dwelt with natural pride on the wines of France, and also upon the zeal with which new kinds of vines had been introduced from other countries; for instance, the famous grapes of Tokai had been acclimatized near Montpelier; and, since 1862, experiments have been made with vines from Portugal in the environs of Rheims.

The Hungarians—who produce more wine than any other people, with the exception of the French and Italians—owe their first vineyards to Rome, the legions of Probus having planted the *Uva Carthagenia*, or currant, called by the Hungarians *kadurka*, on the banks of the Lower Danube; the grapes which yield the famous white Tokai were introduced into Hungary from Italy by the French prince, Louis d'Anjou, in the fourteenth century. It was to the French also, said M. Drouyn de Lhuys, that Russia owed the few vineyards existing in the southern portion of her immense territories; the Crimea was thus enabled to produce the wines of Soudak and Koz, and the Cossacks to fabricate those white wines which are converted into a sparkling wine resembling Champagne. The extreme coldness of the winter in Russia makes it necessary to have recourse to the plan mentioned by Strabo as being practised on the slopes of the Palus-Méotide; the vine-plants are buried, during the whole period commencing with October and ending with March, four or five feet beneath the ground. The speaker mentioned the curious fact that Chiua had the finest grapes in the world, and gave great attention to the cultivation of the fruit for eating, while the making of wine has long been interdicted in order to put a stop to drunkenness. One delicious kind of grape, grown near Tien-tsin, has oval berries two inches in length, and French connoisseurs say that they are unequalled. He alluded also to the growing importance of the vineyards of Australia, and added that a Frenchman was managing some vineyards on the banks of a tributary of the Murray, which promised, it was said, to rival some day the products of the mother country; and, further, that the Société d'Acclimatation had supplied that of Melbourne with a fine collection of cuttings, presented for the purpose by the Grand Référendaire of the Senate. M. Drouyn de Lhuys finished with the following excellent passage:—"Allow me only to draw two conclusions from what I have said. For

centuries the world has practised acclimatization without knowing it; and France, guided simply by the instincts of her civilizing genius, entered on the road before Science had set up the landmarks and indicated the limits. Now that she is supplied by you with a methodic itinerary, her course will be at once more sure and more rapid."

In addition to the ordinary medals and rewards granted by the society, annually, in the various sections of zoology and horticulture, amounting to more than fifty, and the list of which included as recipients several foreigners—Austrian, Russian, Caucasian, Spanish, Dutch, Italian, Norwegian, Egyptian, and Tunisian, colonists of Mauritius, Bourbon, and Sumatra, an Australian named Youl, and an Anglo-Indian, Mr. R. C. Beavan—some important extraordinary prizes were awarded this year. The sum of 800 francs was awarded to M. Jacquemart, of Quessy, in the Aisne, for the breeding and applying to labour the offspring of the yak and the French mountain-cow, capable of carrying loads up steep inclines. A prize of 1,500 francs was given to M. Enriat Perrin, of Roville, in the Meurthe, for breeding twelve or more Angora goats, pure blood, with fleece equal to a standard type. A first prize of 1,200 francs to M. Frédéric Lequin, of the farm school of Lahayevaux, in the Vosges, for twelve three-quarter-bred Angoras under like conditions; and a second prize of 800 francs to M. Fabre, director of another farm school, that of Vaucluse, at Saint Privat. Medals, of the respective values of 300 and 200 francs, were awarded for memoirs treating of the breeding of Japanese silkworms in France during the past year.

Amongst the latest acquisitions of the society are a beautiful female onagre, or wild ass of the Soudan, with a young foal; a young guépard or hunting leopard, perfectly tame, and fondling its keepers like a cat; and three larvæ of the leaf-insect or leaf-fly, which resembles in such an extraordinary manner the leaf upon which it lives and feeds. These curious grasshoppers, for they belong to that family, are from the Seychelles Islands.

The acclimatization of the ostrich has been and still is one of the pet ideas of the society, and considerable success seems to have attended its endeavours; young birds have been born in the domestic state at Grenoble, in the Zoological Gardens of Marseilles, and in Algeria. It is not supposed that the ostrich will ever flourish in the colder parts of France, but there seems no reason why they should not succeed in the warm parts, such as Languedoc and Provence; as regards this, it is said, and apparently with reason, that the bird might become as completely domesticated as ordinary poultry, and that there is no reason why it should not be bred largely, not only for the sake of its feathers, but also for its eggs and flesh. The Paris Society has just received an ostrich fifteen months old, born at Grenoble, and four others born in the Jardin d'Acclimatation of Algiers.

The society received, during the past year, twenty-five parcels of seeds, of 118 different kinds, from America, the Cape of Good Hope, India, China, Australia, the Canary Islands, Abyssinia, Senegal, and Algeria, and distributed them amongst more than a hundred societies and private individuals who applied for them. The garden of the society in the Bois de Boulogne is now putting on its most attractive appearance, and is becoming one of the most favourite resorts in the neighbourhood of Paris for all who love natural history, and can be interested without music, singing, or dancing.

It will not be out of place here to mention a great improvement which has been introduced of late in the Jardin des Plantes with respect to the larger savage animals. A very fine maneless lion may now be seen in comparative liberty, pacing or bounding about within his own railed garden, as large as a moderate-sized room, and exhibiting his beautiful proportions and wondrous agility in a manner scarcely ever before seen in Europe; the creature has a house within which he can shelter himself when he pleases, with a small terrace in front of it, which serves admirably as a pedestal for his form, whenever his restless nature permits the creature to stand still there for a moment. We saw a team of horses pass in front of the lion's garden, and the intense excitement expressed in the face and the attitudes and movements of the king of the forest, would have furnished an animal-painter with an admirable study. A lioness and a wild boar occupy another detached cottage and small garden, much smaller than that of the lion, and keep a little dog, who seems on the best of terms with both his hosts, and inclined to bully them rather than otherwise. The old Jardin had fallen into a somewhat neglected condition, and it is pleasant to see such a proof of vitality and desire of improvement in the management.

THE BREED OF HORSES IN ENGLAND AND FRANCE.

THE triumphs of *Fille de l'Air* and *Gladiateur* are not likely to be forgotten for some time on either side of the Channel: the facts are beyond question, but the best judges are probably anything but unanimous as to the causes. M. Houël, honorary Inspector-General of the Imperial Haras, has just published a brochure, in which he not only records the fact of England's defeat, but tells the world what, in his opinion, were the reasons why we were beaten, and ought to have been beaten.

In the first place, M. Houël says that there is only one province in France fit to breed what he designates the "pure Western race of horses," and that province is Normandy, which is only, he avers, a part of England cut off by a convulsion of nature. The first horses of the past year, *Gladiateur*, *Gontran*, and *Mandarin*, were not only born in Normandy, but nearly all their sires and dams were Norman; *Fille de l'Air* is descended from three mares born in Normandy; *Palestro*, as well as his father and mother, were Norman; and the two most famous French horses, *Fitz-Gladiator* and *Monarque*, are both Norman. As breeding-places, M. Houël places England and Normandy on a par, and there is the same equality, he says, in the matter of education and training: the methods being alike, and the greater part of the trainers and jockeys being English.

The principal cause of the rapid progress of the French racers, and of the success which they have achieved is, according to M. Houël, the excellence of the method which has been followed by the administration of the Imperial Haras, and also by private breeders, in the choice of breeding horses. He says that with us racing has become a mere game, and a speculation in which the improvement of the horse is much less considered than the opportunity of betting, and that animals have been chosen with far more regard to fleetness than to conformation. Speed, he says, when cultivated alone, may lead to strange abuses, and in the end produce an animal that can scarcely put one leg before the other. It is impossible to hide the fact, says M. Houël, that in consequence of the exaggerated importance attached to speed, the breeding types have of late years become notably inferior in England; the wise precept established by the English themselves, that three things are necessary, "*Blood, speed, and beauty of form*," has been too much neglected. If, he argues, either of these must be sacrificed, it should certainly be the second.

France, we are told, has followed a totally opposite course to that of England in the purchase of breeding stock; the administration has always given the preference to those exhibiting the most beautiful conformation, and, above all, perfectly free from blemish. The *Emperor*, sire of *Monarque*, and grandsire on the male side of *Gladiateur*, was, according to M. Houël, the most perfect horse with respect to conformation that it was possible to

see; but, as he had achieved little success on the course, having scarcely won anything but the Czarowitz stakes, he was sold for a moderate price. As to *Gladiator*, maternal grandsire of *Gladiateur*, this horse presented a type of such marvellous beauty that it is impossible to conceive how England could part with him; and certainly, adds M. Houël, if the English had possessed a public administration or a disinterested society, seeking only the improvement of the race of horses, that magnificent animal would never have crossed the Channel. *Gladiator* was irreproachable as to form, and exhibited an amount of elegance and distiuction that recalled the Arab breed in all its ideal perfection. He was bought by the administration of the French Haras and sent to Pin, and gave rise to those splendid reproducers, *Fitz-Gladiator*, *Ventre Saint Gris*, *Surprise*, *Capucine*, who will for ever keep alive his renown in the annals of the French turf.

Another Frenchman, M. de Saint Germain, expressed in the Corps Législatif, last session, similar opinions respecting French and English breeding, and condemned moreover, the abuse of two-year-old races, declaring that such trials at an age when the osseous frame of the horse is not completely formed, have gradually undermined the good constitution of the English racer.

The idleness in which English racers generally live after the age of three years or so, is also greatly condemned. When a first-class horse has undergone his proofs the animal is not completely developed: his organizatiou is not perfected. It is not enough that he should have made exertions as a colt; exercise must be continued, in moderation of course, but to a sufficient extent to keep up the habit of action in the principal members. The Arabs well know the necessity for this, and when Abd-el-Kader sent a choice stud-horse to Louis Napoleon, he recommended that it should run once a week. The administration of the Haras has always adopted and carefully practised the system of continuous and systematic exercise of a practical kind.

Another cause of the supposed falling off of the English stock, is in-and-in breeding. Every year, says another French writer, there is a desire for the progeny of a favourite horse, and the consequence is that in a few years all the young racers descend from the same sire, and many excellent families of horses are allowed to die out, simply because they have not furnished a great winner during a generation. The development of a lymphatic temperament, and the early failing of members are declared to be the inevitable results of such a system.

It is said that France is now behind England in nothing connected with race-horses but the want of good training-grounds, which will be found or formed in sufficient numbers before long.

The opinions quoted above are deserviug of the earnest consideration of the English breeder; many of them are without doubt perfectly true in principle, although the facts connected with them may here and there be exaggerated. It is better, however, always to overrate than to underrate a rival, and in matters such as this of which we are treating, it is well, if we are beaten, that we should know it. Allowing, therefore, that the points laid down are all perfect, and that the English system, or rather practice, is as bad as possible, it would be unfair to dismiss the matter without calling to mind the fact that the deterioration of the English racer is not proved by the superiority of two, three, or a dozen horses bred in another country, and descended from British sires. But if racing and horse-breeding be worth doing at all, they are worth doing well; and if English breeders cannot keep or retake the lead, they had better give up the race: the second place is unworthy of those who have so long been first.

A very remarkable exhibition of half-bred horses took place in the Champs Elysées in April under the direction of the *Société hippique française*, the object of which is the encouragement of the breed of hunters, military, carriage, and saddle horses,—in short, half-bred horses of all kinds. There were from 300 to 400 horses exhibited, including a large number from the Imperial stables. A great number of prizes were awarded, and the exhibition finished with a *carrousel* by the officers of the cavalry school of Saumur. This exhibitiou was duly reported in the English papers, and we only refer to it for the purpose of informing our own countrymen of the steps taken in France for the encouragement of the breeders, as well as the improvement of the breed, of the valuable class of animals which the society in question has taken under its especial patronage.

SCENE ON THE LOGIER RIVER, ZAMBESI.

THE FULL-STRIPED QUAGGA (*Equus Chapmanni*).

By THOMAS BAINES, F.R.G.S.

IN the year 1860, having returned to Cape Town from the Zambesi expedition, worn out with fever and literally almost destitute, I determined not to desist from the attempt to penetrate into the iuterior of Africa, and the generous hospitality of my friends, Mr. and Mrs. Logier, enabled me to devote to the purpose of my re-equipment all the proceeds of my art during my residence in the colony.

I was fortunate, too, in meeting with an esteemed friend, Mr. James Chapman, who, since I had known him, ten years before, on the Vaal River, had been almost continually eugaged in travel, and was then fitting out another expedition for the purpose of exploration combined with hunting and commerce. He had himself crossed the continent of Africa from the east, reaching Walvisch Bay on the west coast, in 1855, being the first European, so far as we know, who performed that feat; and only by the desertion of his native crew he missed being the discoverer of the magnificent Victoria Falls of the Zambesi, two years before they were seen by Dr. Livingstone.

He invited me to join; we agreed to attempt the passage from Walvisch Bay to the Delta of the Zambesi on the east coast; and, for the navigation of the river below the Falls, I constructed a copper double boat in twelve sections, only four of which we were able to carry up. After visiting the Falls, in July, 1862, I selected a small hill, nearly a hundred miles farther down, which I named after my friend Logier, and began cutting and sawing trees into plank to rebuild the missing portions; while upon my friend devolved the arduous task of hunting to supply the whole of the party with meat. Unfortunately, the carriers were able to lighten their cargo and gratify their appetites by one and the same process, and not a tithe of the liberal supply ever reached me. I had, therefore, to leave my work and go hunting: fever and starvation came on; one of my party died, and seven of Mr. Chapman's. He was himself so ill that, as he was unable to join me, I was obliged finally to abandon my work when I had every prospect of being able to complete it and to return to him.

It was during my residence here that the incident occurred which forms the subject of the illustration. On Sunday, the 7th of December, I had shot a spur-winged goose, out of a flock that came to feed upon the youug grass which the rains had caused to spring up; and I had wouuded, but could not capture, a Guinea fowl. As our meat was entirely expended I omitted the morning service, and went out with two Damaras—Matokolo and Kajumba—over the red and rugged hills to the southward, between the Logier River and the Luisi. The dense forest along the Zambesi bank comprised many varieties of noble timber trees, which, small as they seemed from a distance, I always found unmanageably

T. Baines. Del

Day & Son (Limited) Lith.

THE FULL STRIPED QUAGGA.

large when I inspected them more closely for the purposes of boat-building.

Two species of mochicheerie, with wood like red cedar, pleasant to work but somewhat brittle, grew plentifully on the lower flats. The dense foliage of one is borne aloft upon the spreading limbs; that of the other is carried in tufts like those of the chestnut on branches that droop and then gracefully curve upward again, bearing a small fig-shaped fruit, with red seeds of an intense bitterness. The stems are seldom less than eighteen inches, but more frequently three or four feet, in diameter, and from twenty to fifty feet or more before they part into branches. A small sapling, growing straight up toward the light through a group of larger ones, yielded me planks more than thirty feet long, nine inches thick at one end and five at the other. Unfortunately, I had to cut it in November, when the sap was up, and, in consequence, it was so heavy that I could not relieve my men of the labour of carrying it by floating it down to my sawing-trestles. Another tree, equally large, but with white and brittle wood and drooping clusters of yellow seed-pods, was also plentiful; and the crashing of one of these, as it fell, once brought the natives, who were unused to the silent operation of the cross-cut saw, to inform me that elephants must be in the forest breaking the trees close by me.

Beside these, were the large kameel thorn (*Acacia giraffa*); the motjeerie, or omborom bongo—the traditionary mother tree of the Damaras—with wood like the lignum vitæ we used to cut for the furnace of the "Ma Robert" on the lower Zambesi; and the motjihaara, or oomahaama, a tree that differs from the stinkwood of the colony or the matundo of the lower Zambesi, in having dry and flattened seed-pods of a brownish tint instead of drooping clusters of bright yellow flowers. On the banks of the rivulets grew the picturesque mosaawē—the pao-pisa of the Portuguese (*Kigelia pinnata*)—a large, soft-wooded tree, nearly impossible to work when cut with the sap in it. It is remarkable chiefly for the dark crimson flowers pendent on stems four feet or more long from its spreading branches. It has a fruit, hard, inedible, and fibrous as a great wooden cucumber.

Higher on the hills grew the gigantic baobab, or mowaua, called here m'boyou, or the house; and farther down the river, the molambeira, with its white blossoms pendent among the rich green leaves, to be followed by the fruit, from whose refreshing (though white and dry) antiscorbutic pulp it obtains among the colonists the name of "cream-of-tartar tree." Many of the stems were stripped from knee to breast height, for the purpose of making cordage of the fibre, leaving, when the process is repeated by successive generations, a series of rings, which may be noticed on the trunk shown in the illustration.

In similar or even more precipitous localities is found the kookom-boyou, or *Sterculia* (?), a tree as tall, with a pithy stem, and wood nearly as unfit for any useful purpose, as that of the baobab. It has straight and upright smaller branches, which may be used as poles where lightness rather than strength is required; while the inner bark, peeled off in strips, forms, while still fresh, good packing or binding thongs, but, when once dry, becomes too brittle to be used a second time.

The maruru papierie, or soft white-wooded tree, bearing the poison grub of the Bushmen, grows also among the red volcanic rocks, with which the white stems and green chandelier-like leaves of the Euphorbiæ, filled with milky but intensely acrid sap, formed a striking contrast.

The white or pale blue lotos, with its golden centre and broad green leaves, floats on the surface of the pools, from the depths of which the natives hook up its edible roots.

Dwarf palms, with feathery or fan-shaped leaves, appear in favourable localities along the rivulets, and occasionally the tall stem of a palmyra is seen in the distance, but they are by no means so common as in the better-watered country above the Falls. I saw a few pallahs; but as no precaution can prevent the all-pervading moisture from insinuating itself between the cap and nipple, my gun missed fire.

The spoor showed that koodoos and quaggas had passed recently; but, as my people remarked, though the game is not scarce, in that thick bush men cannot distinguish it with the eye. I took up the tracks of the quaggas, and followed them for many a weary round, till the men proposed to give it up and come again to-morrow. But as the camp was destitute of meat, to return without it to the hungry people was not to be thought of. At length Matokolo fell flat backward in the bush—his keen eye had caught sight of the game; but it was too late, and the quaggas dashed off to the opposite side of the valley. We left the spoor, and, climbing behind the hills, crept slowly and silently, not daring even to break a twig, to the brow, where, far beneath me, I saw the head and shoulder of one. The short, sharp cry of alarm was uttered at the same instant; the herd started as I pulled trigger, and dashed away down the valley to the westward.

Blood-spots on the stones and leaves encouraged us to follow. We caught a glimpse of one alone, and, after a chase of four miles, Matokolo was seen returning triumphantly. He had outrun me; and failing to kill the crippled quagga with his musket, had headed her, and knocked her down with a stone. My shot, aimed at the shoulder, had broken the hip-joint, as she started forward; and Matokolo's had barely grazed the skin of her back.

"*Haak aan* (be quick), Mynheer, with your sketch-book," said old Kajumba; "and let us begin to eat."

The chase had brought us to Logier River, only three miles from the hill; and word being sent there, the halt, the sick, and all the women who seemed at the point of death, came tripping along like fairies to the promised feast, leaving not a creature to guard the house.

No sooner was permission given to cut, than Kajumba's knife flew, as if by its own volition, to make the incision round the tail; but I stopped him in time, and, returning to the hut, dined off as much of my goose as had not been feloniously abstracted from the pot, and attempted, but in vain, to dry and preserve the quagga skin, by stretching it above the fire in our cooking-hut.

The animal was a mare of the full-striped quagga, which Chapman had first shot on May 20, 1862, upon the plains some distance to the south; and which, when he mentioned to me that it had stripes upon its legs, I at once guessed must be a new variety. The common quagga of Kaffirland (*E. quagga*) has no stripes upon its rump or legs, while the bonte quagga (*E. Burchelli*) has the legs white from the houghs and knees. The zebra, as we call it in the colony, or *E. montanus*, has longer ears, and more asinine head, hoofs, and tail, and is found only on mountains and broken ground, whereas immense herds of the newly found variety live upon the plains, where there are no mountains within many days' journey.

Since then, we shot, and I sketched, while my friend photographed, as many specimens as we could; but I only succeeded in saving one skin, which though it reached the Cape in good condition, was so destroyed by insects before it reached the British Museum, that Dr. Gray could not form a judgment on it, and was obliged to send it to be buried.

The colour of the animal is generally white, more or less deeply tinted on the back, the rump, and shoulders, with Sienna brown, which is also prevalent about the muzzle, blending into the black of the lips. The brown of my present specimen was very faint, and in a young stallion previously shot by Chapman the ground was pure white. The stripes are of the deepest possible brown, or even of jet black, continued down to every hoof. They are sometimes so strongly marked that the black spreads almost over the fetlock and pastern, and in others so faintly as to be hardly perceptible; in all cases the inside of the forearm and thigh is more faintly marked.

A black line runs from between the fore legs along the belly to between the hind legs, where it spreads, and becomes less dark; and in the female, the teats, two in number, are placed in the after-part of it. There is also a black stripe upon the back, extending from the mane down the root of the tail to the brush, which is black and equine, though hardly so full as that of the horse. In fact, the inside hairs of the mane are black also; but, on the outside, the vertical stripes of black and white upon the neck and withers are continued up it. The mane comes well

down upon the forehead, and the ears—which are six inches and a half long, cross-banded with black and tipped with dark brown—are not seen above it, but are, in fact, rather lower. The stripes upon the sides are all more or less perfectly connected with the vertical line. Sometimes two or three of them, sometimes more, join the dorsal line upon the shoulder, but never far behind it; the others either terminate before reaching it, or are curved backward over the flanks and rump till they merge into the horizontal stripes upon the thigh. Those on the shoulders open more or less, so as to form a beautiful series of triangles, in conjunction with the horizontal stripes of the fore leg. No two specimens are exactly alike, and the stripes even on the two sides of the same differ a little, so as to give a pleasing variety, without injuring the symmetry. Sometimes there are intermediate stripes of light brown, between the black ones, on the hind legs, above the hough. It has warts or callosities on the fore legs only. Mr. E. L. Layard, the eminent naturalist and curator of the museum in Cape Town, says:—"This new animal differs from *E. montanus* in the union of all the stripes with the medial one on the belly, and in wanting the gridiron pattern (as Baines calls it) on the rump; also, from the other zebras, in having the callosities on the legs far larger and more round; in having shorter and more equine ears, six inches and a half high, instead of eleven and a half; and in having a shorter and more equine head and tail. The mane grows several inches down on the forehead, and stands up between the ears; so that when seen in front it is far higher than they are. Chapman and Baines give measurements of several individuals. All who are competent to judge, from knowing the other species, will at once detect the difference. I am well convinced of them myself, and I wish to call the animal *Equus Chapmanni*, after its discoverer, Mr. James Chapman, who has done so much for African discovery, and has yet reaped no reward."

For my own part, I trust that the name proposed by Mr. Layard may be adopted by naturalists at home, and that when the journal of my friend—the result of nearly sixteen years' research in Southern Africa—is published, he will at least reap the reward of being as well known to the public of this country as he deserves to be.

THE AILANTHUS SILKWORM, AND ITS CULTURE IN ENGLAND.

(*Bombyx Cynthia.*)

By W. B. Tegetmeier.

THE failure of the silk-crop in Europe, in consequence of the destruction of the silkworms by the peculiar disease known as "La Gattine," has directed the attention of several of the Continental governments to the introduction of new silkworms capable of supplying the place of the ordinary mulberry-feeding insect, the caterpillar of the *Bombyx Mori*.

It is hardly necessary to inform the gentler portion of our readers that the price of silk, in consequence of the ravages of the disease, has of late years become nearly doubled: nor is the increased price to be wondered at, when we are informed that, in some of the countries in the South of Europe, the produce, in spite of an extension of the mulberry and silkworm culture, is less than one-tenth of its former amount. The total weight of the cocoons produced in Tuscany, during the year 1865 was only 42,000 kilogrammes —the produce in previous years having frequently amounted to 480,000 kilogrammes, each kilogramme being equal to 2 lbs. 2 oz. English weight.

As there is no known remedy for this formidable disease, the French government, recognising the vast importance of the subject, directed M. Guérin-Méneville to investigate the natural history of the silk-bearing insects, in order to ascertain if any of them were capable of being substituted for the mulberry worm. Two species have already been successfully introduced into the South of Europe, being sufficiently hardy to bear exposure to the open air and to feed on the plants growing in the ground. These are the *Bombyx Ricinus*, or castor-oil silkworm, and the *Bombyx Cynthia*, or ailanthus silkworm. Others will probably be found sufficiently hardy to withstand our climate, but at present we have to do only with the ailanthus worm. Europe is indebted for the introduction of this valuable insect to the labours of the Abbé Fantoni, a Piedmontese missionary, who forwarded it from the province of Shang-Tung, in the north of China, a district that is said to resemble in its climate the northern parts of Germany. The cocoons forwarded by Fantoni in the autumn of 1856 were hatched out at Turin in May, 1857, when the first living specimens of this beautiful insect were seen in Europe. In 1858, specimens were received at Paris; and Mr. F. Moore, of the East Indian Museum, exhibited specimens hatched in 1859 before the members of the Entomological Society of London. Lady Dorothy Nevill was, however, the first to rear the insects in any numbers; and, more recently, Dr. Alexander Wallace, of Colchester, has devoted great attention to their culture in the open air, having planted the banks of the railway near his residence with many hundred ailanthus trees, and reared many thousand worms during the past two or three seasons. The ailanthus shrub or tree has been long known in England, where it has generally been termed the false varnish-tree of Japan. It is a hardy ornamental tree, growing freely even on the poorest soils, flourishing in the midst of the smoke in many London squares, and producing its large compound leaves freely even on the barren Landes of France and the sterile dunes of Holland.

The ailanthus worm appears equally hardy; covered with a powder which repels the wet, it is indifferent to rain and wind, provided that the violence of the gale is not sufficiently great to bruise it by the swaying of the branches.

The climate of England appears to suit it even better than that of France, if we may judge by the results that have been obtained, the moths reared in this country being finer in colour and larger in size than the first imported specimens.

Unlike the mulberry silkworm, that passes through our winter in the egg and hatches with the return of the warm weather, the *Bombyx Cynthia* passes the winter in the cocoon, whence it emerges in the summer, lays its eggs, and dies. These eggs hatch in from ten to eighteen days after they are laid, and if the caterpillars are produced early in the year, there is time to rear two generations of moths during one season.

It is, however, probable that in practice it will be found most desirable to rear only one brood, as the second produces cocoons which are much smaller in size, and consequently less valuable than those from the first brood. The issuing-forth of the moths from the cocoons is most graphically described by Dr. Wallace in his "Essay on Ailanthiculture." It received the prize offered by the Entomological Society of London, and we regret we are not able to extract the passage at length. He states, in conclusion, that the whole process of birth does not occupy a minute.

After the moths have emerged, Dr. Wallace finds it most advantageous to keep them in large cylinders formed of perforated zinc, against the sides of which the eggs are deposited: these are readily removed by slight friction with the finger, and if kept moist will hatch in from ten to eighteen days, varying with the temperature in which they are kept. The eggs are larger than those of the ordinary silkworm moth, and sufficiently firm to bear transit by post without injury, especially if secured in a quill. Each moth lays a number of eggs varying from one to three hundred.

The larvæ or caterpillars, when just hatched, are dusky black; they moult several times. The first moult takes place from seven to ten days after they are hatched; they then appear of a light yellow. This colour they retain for five or six days, when their second moult takes place, and then their skin secretes a peculiar yellow powder looking somewhat like the down on a plum. This repels water, and it is to it that they are apparently indebted for their power of resisting rain. The third moult takes place in about six days after the second, when the larvæ become of a greyish blue, and are so very much covered with white powder as to look as if dusted over with pounded sugar.

It requires but another interval of six days to bring on the final moult, after which the worms eat enormously. Dr. Wallace states that they grow so rapidly as to increase in weight as much as six-fold in nine days. Their appetite is so voracious that it is quite common at this period of their growth to see a tree covered with foliage one day and quite bare the next; while the hungry larvæ are gnawing down the tender ends of the leaf-stalks, or are wandering off to other trees in quest of food. It is, he says, often a startling surprise to see bare leaf-stalks, where luxuriant foliage existed twenty-four hours previously. During this final period of their caterpillar or larval state, the worms assume their most beautiful aspect. When full grown they are magnificent in size, and the greater part of the body is of a most delicate green colour, covered with tubercles tipped with an exquisite marine blue tint, while the head and tail are tinged with a brilliant golden yellow. The food taken during the last stage supplies the nourishment from which the silk is produced. In the interior of the body of the worm are two very long convoluted tubes. These, shortly before the cocoon is spun, become filled with the liquid which is drawn out in the silken fibres of which the cocoon is constituted.

Although known as the ailanthus worm, from feeding on the shrub of that name, there are many other plants on which the *Bombyx Cynthia* will thrive; the ailanthus, however, appears to be its proper and favourite food.

The common laburnum is eaten greedily, and the castor-oil plant is also taken readily. The changes which are effected in the insect by an alteration of diet remain to be seen. Many entomologists imagine that the castor-oil worm (*Bombyx Ricinus*) and the ailanthus worm are varieties of the same animal—the differences between them being caused by alteration of food. If so, it is a remarkable instance of an extreme variation, not only of form but of habit, resulting from external circumstances; for the castor-oil worm rears several broods in the year, the ailanthus only producing one or two.

The spinning of the cocoon offers one of those remarkable examples of instinct that are apparently so inexplicable. The worm feeds on trees whose leaves are deciduous, and its cocoon is formed by bending a few leaflets together and spinning the mass of silk in the midst. In the natural course of events the leaves would fall in the autumn; and the cocoon would thus become liable to injury from lying on the ground. But this evil is entirely obviated; for, with an instinct that looks almost like foreknowledge, the worm, before spinning its cocoon, passes along the lengthened footstalk of the leaf, and spins an excessively strong band of fibres, connecting it firmly to the stem of the plant. These fibres are continued round the footstalk down to the leaf itself; so that even if the stalk of the leaf be broken from the branch, or fractured in any part of its length, the cocoon cannot drop, being securely held by the strong silken fibres that connect it to the parent stem.

Having thus secured its foundation, the worm pulls several of the leaflets together, or curls inwards the edges of one of sufficient size, and proceeds next to spin the silken covering with which it is concealed from prying eyes during its marvellous change from caterpillar to perfect insect. As is the case in ordinary silkworms, the outside of the cocoon is first formed, the worm working from without inwards, and arranging the silk in successive layers one within the other. This operation lasts for a considerable time, and the worm can be heard moving in its narrow cell for many days. There is one very important difference between the cocoons of the ailanthus and those of the mulberry worms, which threatened to offer almost insuperable difficulties to the utilization of the produce of the former. The layers of silk, as they are spun, are agglutinated by an exceedingly tenacious gum, which connects the threads so firmly together, that the cocoons cannot be reeled off in the usual manner.

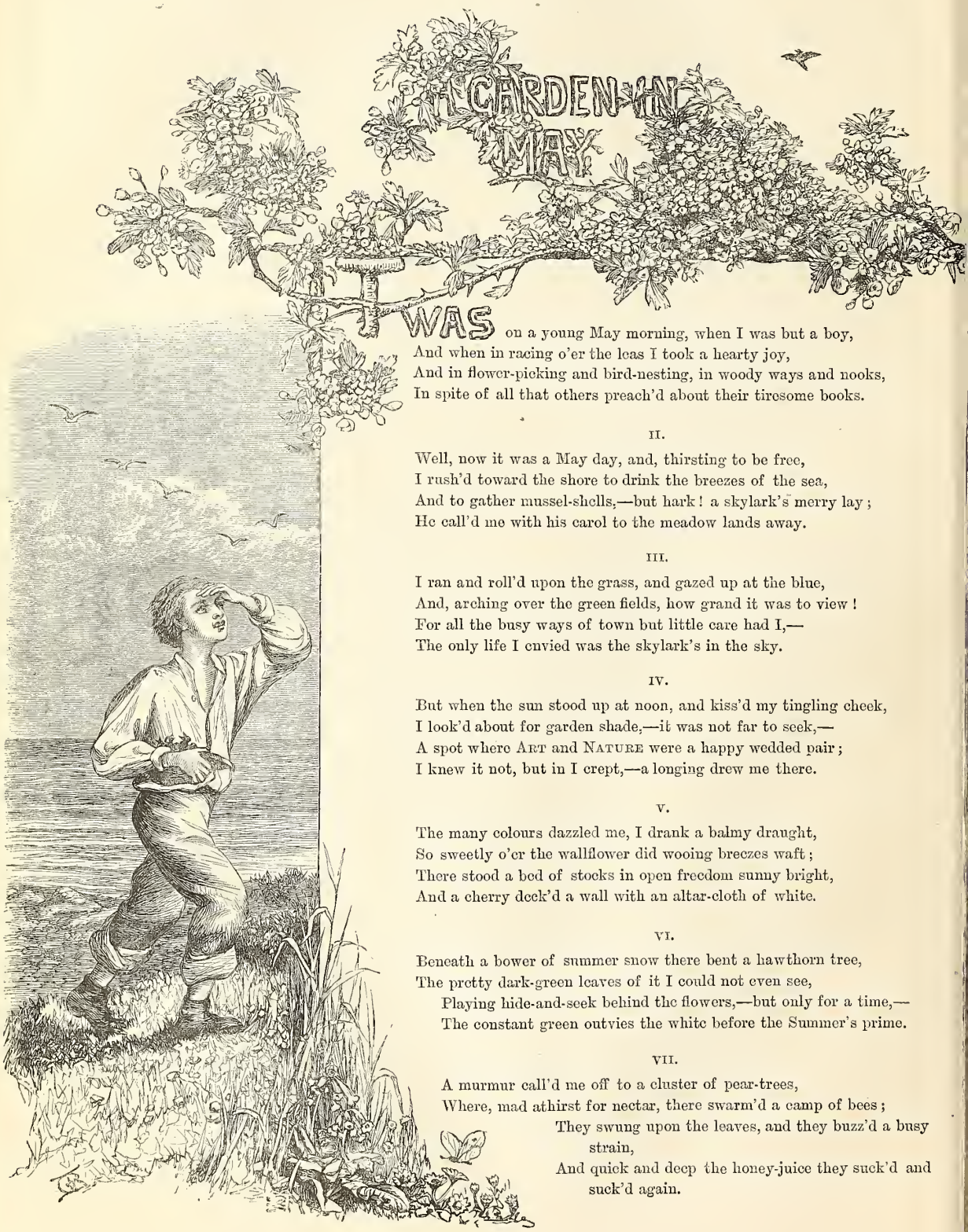
Hitherto they have been separated by carding. From experiments which have been recently made with the object of dissolving the gum, there appears but little doubt that eventually the silk will be reeled off the cocoons in one continuous fibre. In fact, this is now done by the Chinese.

It must not be imagined that ailanthi-culture is still entirely a mere experiment. The worm is largely cultivated in the north of China. Ailanthus silk fabrics are sold as regular articles of commerce in France; and, though not possessing the distinguishing gloss of the ordinary silk, are remarkable for their beautiful appearance, and, above all, for their almost everlasting duration. It is said that in China a dress of this material descends as an heirloom for generations. Nor is the possibility of the successful culture of the worm in England a mere uncertainty. Dr. Wallace has planted many thousand ailanthus trees along the Essex railway banks; and these, last season, were all utilized. In fact, the introduction of this useful insect offers good prospect of establishing a new and profitable national industry, one which can be pursued advantageously in the most barren and sterile places; and which offers a lucrative employment to those persons who are by age or sex incapacitated for severer exertions.

For the efforts of Lady Dorothy Nevill, Lady Mary Thompson, and Dr. Wallace, we can desire no better reward than that such a result should crown their exertions.

[As many of our readers may be desirous of propagating this handsome and interesting insect, some remarks on the cultivation of the shrub producing the leaves on which it feeds may not prove unacceptable; and as the subject has been so ably treated by M. Guérin-Méneville in his treatise on the "Ailanthus," we cannot do better than give an extract from Lady Dorothy Nevill's translation of that work.—Ed.]

"The seeds may be sown from the month of February till May, broadcast or in rows, and ought to be covered with about half an inch of earth, and they will appear from three weeks to a month after they are sown. With the exception of a few cereal grains, there are hardly any other shrubs where the seed germinates so quickly, and it is not uncommon to see some of the shoots from these seeds thirty and fifty inches high the first year. Numbers of ailanthus trees have been planted on the Apennines, because they resist the bite of animals, and no ground game will touch them on account of the smell they exude when a leaf is gathered or a branch broken off. Those trees destined for the reception of the worms ought to be planted about a yard from each other, the chief stem cut down every year, so that the young shoots spring up and afford young tender leaves for the worms; and by planting them not too great a distance one from another, the shoots join each other, and thus enable the worms to go from one plant to another. As I mentioned before, this tree may be multiplied by its roots, which may be cut off and planted, as we do potatoes. Where the plants are yearly cut down, they naturally will not flower or seed. Experience has taught me that if trees are planted from twelve to fifteen feet high, they may be cut down immediately to within two or three feet of the soil, so that they will immediately throw out fresh shoots. This tree is so hardy and so easy to propagate that in a plantation of 15,000 to 20,000 plants made in France not one died. In England it is equally hardy. I planted three dozen standard plants on a sloping bank, exposed to the sun; the heads were cut off, and the leaves began to sprout about the middle of May."



I.

'TWAS on a young May morning, when I was but a boy,
And when in racing o'er the leas I took a hearty joy,
And in flower-picking and bird-nesting, in woody ways and nooks,
In spite of all that others preach'd about their tiresome books.

II.

Well, now it was a May day, and, thirsting to be free,
I rush'd toward the shore to drink the breezes of the sea,
And to gather mussel-shells,—but hark! a skylark's merry lay;
He call'd me with his carol to the meadow lands away.

III.

I ran and roll'd upon the grass, and gazed up at the blue,
And, arching over the green fields, how grand it was to view!
For all the busy ways of town but little care had I,—
The only life I envied was the skylark's in the sky.

IV.

But when the sun stood up at noon, and kiss'd my tingling cheek,
I look'd about for garden shade,—it was not far to seek,—
A spot where ART and NATURE were a happy wedded pair;
I knew it not, but in I crept,—a longing drew me there.

V.

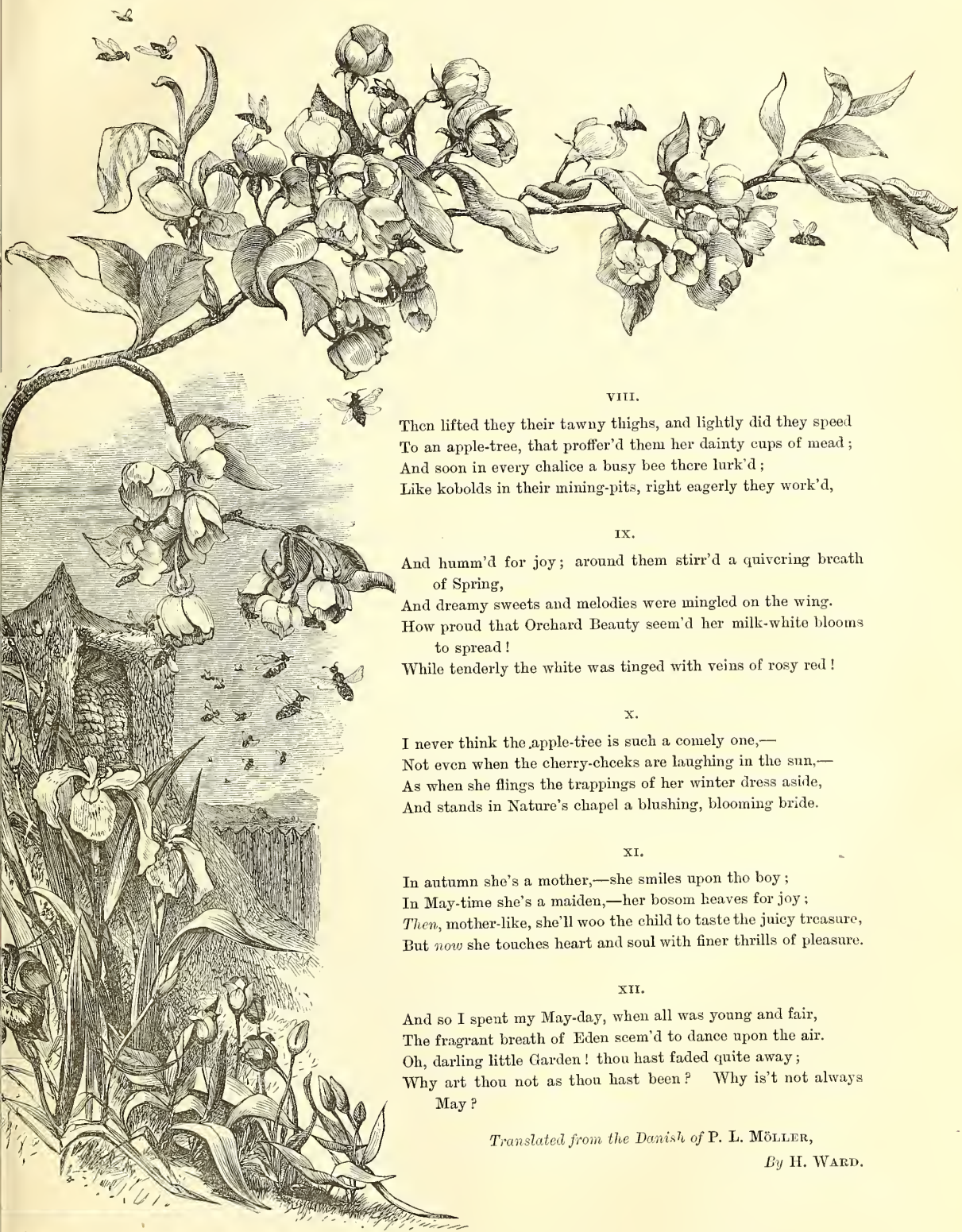
The many colours dazzled me, I drank a balmy draught,
So sweetly o'er the wallflower did wooing breezes waft;
There stood a bed of stocks in open freedom sunny bright,
And a cherry deck'd a wall with an altar-cloth of white.

VI.

Beneath a bower of summer snow there bent a hawthorn tree,
The pretty dark-green leaves of it I could not even see,
Playing hide-and-seek behind the flowers,—but only for a time,—
The constant green outvies the white before the Summer's prime.

VII.

A murmur call'd me off to a cluster of pear-trees,
Where, mad athirst for nectar, there swarm'd a camp of bees;
They swung upon the leaves, and they buzz'd a busy strain,
And quick and deep the honey-juice they suck'd and suck'd again.



VIII.

Then lifted they their tawny thighs, and lightly did they speed
To an apple-tree, that proffer'd them her dainty cups of mead;
And soon in every chalice a busy bee there lurk'd;
Like kobolds in their mining-pits, right eagerly they work'd,

IX.

And humm'd for joy; around them stirr'd a quivering breath
of Spring,
And dreamy sweets and melodies were mingled on the wing.
How proud that Orchard Beauty seem'd her milk-white blooms
to spread!
While tenderly the white was tinged with veins of rosy red!

X.

I never think the apple-tree is such a comely one,—
Not even when the cherry-cheeks are laughing in the sun,—
As when she flings the trappings of her winter dress aside,
And stands in Nature's chapel a blushing, blooming bride.

XI.

In autumn she's a mother,—she smiles upon the boy;
In May-time she's a maiden,—her bosom heaves for joy;
Then, mother-like, she'll woo the child to taste the juicy treasure,
But *now* she touches heart and soul with finer thrills of pleasure.

XII.

And so I spent my May-day, when all was young and fair,
The fragrant breath of Eden seem'd to dance upon the air.
Oh, darling little Garden! thou hast faded quite away;
Why art thou not as thou hast been? Why is't not always
May?

Translated from the Danish of P. L. Möller,
By H. Ward.

ON SKETCHING FROM NATURE.

By Aaron Penley, Professor of Landscape Painting at the Royal Military Academy, Woolwich.

No. I.

ON introducing to the notice of the reader the following hints for sketching from nature, I must be clearly understood as by no means pretending to have discovered any "royal road" to the acquisition of the whole art and mystery of water-colour drawing. Like the poet, the painter must, I apprehend, be "*born*, not *made*;" and not even the most naturally gifted, as respects taste and intelligence, may hope to attain to more than a moderate skill without such a devotion of time as the successful pursuit of every other profession requires of those who embrace it. There are, however, thousands of those who take their pleasure by hill and river, who have neither the poetic "afflatus," nor the aspiration to be professed artists; and to whom a rudimentary knowledge of sketching in colour would be a highly-prized acquirement. To such as these I now address myself.

Apart from its utility, there is perhaps no accomplishment more to be desired than sketching from nature, and so transferring to paper, when opportunity offers, some of her choicest scenes. It gives an additional zest to travel, and adds, in a peculiar manner, to the intelligent traveller's store of information. For it is impossible to put pencil to paper without being struck by the perfection and completeness of objects before us; and we can imitate none of nature's forms without an elevating appreciation of their character, construction, and purpose. Nature and Art should ever go hand in hand; the latter attaching itself closely to the former as to an infallible guide. Every principle of art is dictated by, and drawn from, nature; and so soon as the hand of the guide is dropped, art will, I submit, cease to excite and gratify the intelligence of a nature-loving public. This proposition I think none will assail; all, indeed, must acquiesce in it. The first precept, therefore, I would address to my student reader is, that however slight a sketch from nature may be, it must be a faithful transcript of the scene or object sketched, without conventionality of any kind.

A "sketch from nature" should imply such a representation of a scene as will give a general impression of it without over much detail, and yet without any such omission as might alter the character or injure the effect produced on the mind. But to secure this generalization without loss of resemblance, an educated eye, a practised hand, and a thorough knowledge of the forms under treatment, are necessary. A "study from nature" is a different thing, demanding the strictest attention to every part, with literal truthfulness in the whole, as well as in each part. Of this I will not at present treat, hoping in future numbers to illustrate it by separate studies.

The first thing to be determined in a sketch is the position of the Horizontal Line. This must be faintly drawn across the paper, and the lines of every object above or below, and not parallel to it, must incline to some point on it. Of course, a certain knowledge of perspective is essential, and the student must acquire it before he can hope to sketch successfully.

To sketch in the outline correctly, it is necessary to observe very attentively the peculiar angles and position of the several objects to be drawn, in order that a truthful direction may be given to every line. All forms deviating from right lines —horizontal and perpendicular—assume certain angles, and upon a just appreciation of these angles the whole correctness of character must depend.

The relative position of the various objects in the field of view being once indicated (first lines should only be "indications"), the undulations or broken outlines, that certain of them may present, should be given, great care being taken against exaggeration,—an error of constant occurrence. It is not sufficient to give the outside lines only, because these are almost always the result of irregularities of surface, which claim to be themselves represented by lines of their own. For instance, the broken character of a mountain's top or side is due to the several masses of rock rearing their rugged heads at different elevations. These masses—if of any size, and in light—should be made to show whence they spring, and thus to express the actual character, or, as I may say, *construction* of the entire mountain. Character of surface, again, is requisite to give character of distance. A little eminence protruding from a mass often tells with immense power, by throwing the more distant scenery far—very far—backward. Unfortunately, amateurs too often undertake to sketch subjects beyond their powers; and in the attempt to take in a multiplicity of objects, lose patience, become careless, and so end by giving but a vague idea of the landscape. Far better would it be to divide the scene, and to make three sketches instead of one.

The best class of subjects for beginners is, without doubt, to be found in the lake or mountain districts—at any rate, as far as outline is concerned—because the principal objects there are few in number, and of large proportions; and in lake scenery, the straight line of water at the mountain's base is of the greatest value to the young sketcher as a guide to the position of objects whose lines rise from it. But in order to give a clearer insight into the process of sketching, I

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furnish you with a coloured drawing, and a skeleton-sketch. I claim the student's attention to the numbers by which each line is indicated on the latter, and would recommend the adoption of the plan in all sketches of a similar kind.

I have selected my subject for its simplicity. It is composed of only four separate masses, and these are so arranged as to afford a variety of angles, as well as of quantities—no two being alike. Repetition of forms, or rather direction of lines and sameness of quantity or size, should always be avoided; and with this view the artist frequently alters his position. The same scene, from different points of view, will assume quite a different composition; therefore, the manner in which the several lines constituting the forms come together should be most carefully studied; and a point should be selected by the sketcher whence they appear to have the most graceful bearing, and to intersect each other, without violent contrasts, at the angles.

In the outline sketch, the line No. 1 is the water-line, and is continued across the paper; 2, a water-line above it, giving the base of the mountain on the right hand; 3, the angles of the promontory; 4, the angle of the direction of the side of the near mountain; 5 and 6, the angles of the summit; 7, the angle of the central mountain from the point over the promontory; 8, change of angle to the top; 9, also a change of direction to the right, notice being taken of its exact incidence upon the line 4; 10 and 11 give the angles of the next mountain; 12 and 13 show the most distant hill. O is an imaginary line drawn horizontally across the top of the central mountain as a guide for the relative heights of the others; and it is important this should be strictly observed. After these lines of direction and position are correctly placed, the undulating and broken outlines (also numbered) are to be given with precision; seeing that each line represents the character of the rocks, and the slope of the different surfaces: as, for example, in the broken ground of the promontory, the trees at its top edge, and the rising ground at the base of the near mountain to the right.

If attention be paid to the method by which these several lines follow in succession, much less difficulty will be experienced in any after-sketches. The boat was put in to fill the vacant space in the water, and as a balance to the drawing.

The pencil outline being complete, it will be better to fix it by washing the drawing with plain water, or a slight wash of yellow ochre and lake, or neutral orange. Cobalt alone is employed for the sky, and is taken over the distant mountains and top of the near one. A tint of cobalt and lake, with a little yellow ochre, is then passed over the distant mountains, and changed, for the nearer hill and crags, to yellow ochre and lake, with a small portion of cobalt to check the brightness of the orange tone. Yellow ochre alone is used for the base and upper portion of the water, and changed again to cobalt about midway to the bottom of the drawing.

The whole of the paper being covered, the various shadows are to be introduced in the distance, and also on the large portions of crag on the right. Cobalt, lake, and yellow ochre are used in different degrees; and the warm light tones washed in over the shadows. Raw umber, gamboge, cobalt, and lake are the colours for the herbage on the promontory, and are put on with a tint of much power, changing the character of tone where required. The different colours of the broken and rocky surface are glazed over the groundwork of grey previously laid on. The white bits of stone at the water's edge are most useful in causing the eye to fall on that part of the drawing, thereby giving a breadth to the whole of the half-tones above, and preventing the gleam of light on the near mountain from being a spot. For this purpose also, the spots of light at the edge and top of the lower range of crag on the right are serviceable in drawing the attention and giving value to the bright tones of the slopes covered with sunburnt grass and heather. The water is simply cobalt in a straight wash, and for the darker lines a little yellow ochre and lake are to be added. If the fingers are placed over the boat, the sketch will be seen to want interest and the weight of colour at the left and in the deep shadows of the rocks to the right will be excessive. It was therefore necessary to overpower these by some object of greater strength and by a little bright colour. The white, again, gives tone to the surface of the water by its colourless contrast. For the bright yellow tints, gamboge is employed; and for the red tones, gamboge with lake or rose madder.

FOREIGN ARCHÆOLOGICAL NOTES.

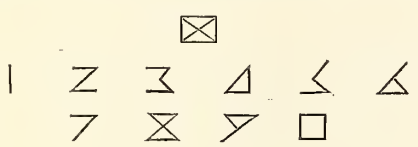
A FEW years since, the discovery of rude caricatures of the Crucifixion, scratched on the walls of the imperial palace at Rome, which had been covered for centuries by an adjoining building, created considerable sensation in the archæological world. A *fac simile* of one of these scratchings appeared in English publications, and was copied into M. Champfleury's history of caricature amongst the ancients, published in Paris last year. Accounts from Pompeii state that similar productions have been found there. "In the palace of the Edile Pansa, in the Street of Fortune," says the report, "has just been found an engraved cross, not finished, bearing inscriptions and caricatures relative to a crucified God." If this be true, we hope some of our countrymen in Italy will furnish us with a careful report on the subject; for such evidences, although of a painful kind, are highly valuable.

Recent excavations in Egypt have also yielded

some highly interesting results. M. Brugst, the Prussian Consul, is said to have in his possession a papyrus roll containing curious particulars relative to the construction of the City of Rameses, and the manufacture of bricks or tiles by Jews employed there. In the valley of Hamath, inscriptions on the walls of the ancient quarries attest the presence there of eight hundred Jewish hewers of stone. The figures which accompany the inscriptions perfectly represent the Israelitish features, with long beards, which were not worn by the Egyptians.

Dr. Dekier is said to have made some interesting discoveries in ancient Stamboul, relative to the Christian era, and reaching down to the sixteenth century.

M. Florian Pharaon, formerly interpreter to the French army in Africa, has just published an account of Louis Napoleon's voyage in Algeria, forming a splendid volume, illustrated by M. Darjon. In this work M. Pharaon treats, amongst other matters, of the mathematical science of the Arabs, and he attributes a curious origin to their numerals. He believes them to have been derived from the lines inscribed on the signet ring of King Solomon. The following cut, copied from the work in question, will explain the supposed origin of the figures.



The figure at the head represents the device on the ring, and those beneath are all derived from it. By rounding off all the angles, with the exception of that at the foot of the second, those of the fourth, one of the fifth, and that of the seventh, we obtain the ten figures of the Arabic numeration. The only addition required is the small horizontal stroke at the head of the figure five. The French attribute the introduction of the Arabic numerals into Europe to Gerbert d'Aurillac, the first French Pope, who filled the chair of St. Peter in the tenth century.

Two archæologists—M. Adrien Berbrugger, keeper of the library and museum of Alger, and M. O. MacCarthy—are now engaged, by order of the Emperor Napoleon III., in trying to unravel the mystery of the *Kebour er Roumia*, which signifies the tomb of the Christian woman in Algeria. This monument stands on the summit of the rising ground between the plain of the Mitidja and the Mediterranean; it is little more than an hour's ride from Algiers, and about half that distance from a little town called Koléah, deliciously buried in a forest of orange-trees. The tomb has been cleared of the accummulations of ages, and is found to consist of a polygonal body resting on a square basement, and formerly surmounted by a cone, or pyramid, in steps. The polygon has lost some of its upper portion, but it is still more than a hundred feet in height, and is supposed, with the pyramid complete, to have been at least one third higher. The diameter of the polygon is nearly two hundred feet, and its surface is divided into panels by sixty Ionic columns, the capitals of which are decorated alternately with palm leaves and wreaths. Four sides of the polygon facing the cardinal points of the compass have false doors, surmounted by entablatures. Borings have been made in nine different places to discover the entrance, or, if no mode of entry were left, the arrangement of the interior of this curious monument. For this purpose advantage has been taken of a breach, said to have been made in the year 1552, by Salah Raïs, and re-opened in 1766, by Baba Mohamed Pacha, while other soundings have been made with steel bars at the north-eastern angle of the base. A cavity is said to have been discovered within the monument, and a horizontal gallery is being opened in the direction indicated. We must wait for the unravelling of the mystery. In the meantime the excavations themselves have not been fruitless: a number of objects of interest having been discovered. These include a golden medal of the Emperor Zeno, a bronze coin of the time of the Numidian kings, and several pieces of money of the lower empire, including one of Gratian, in excellent preservation; eight amphoræ, and a bronze bracelet and car-ring.

One of the oldest monuments in Paris—the oldest of all, indeed, with the exception of the remains of the palace built by Augustus Cæsar, the *Palais des Thermes*, adjoining the hôtel and museum of Cluny—is the abbey of Saint Pierre, on the hill of Montmartre, and the archæologists were in a state of alarm the other day that the ancient remains were about to be swept away by the demolishers. It is said, however, that although the church is in a sadly decayed condition the authorities will do all in their power to preserve so interesting a memorial of past times. The present building is of the twelfth century, but it was raised upon the remains of a pagan temple; the columns of the apsis are Roman, and are said to have formed a portion of that temple.

Another monument, not of nearly the same antiquity, but highly interesting in itself, is likely to be brought into public view by improvements about to be made in another quarter of Paris—this is the *Donjon de Jean sans Peur*, the last remnant of the old hôtel of the dukes of Burgundy. The building is quadrangular; but it has been so completely built in and over, although it is more than sixty feet high, that it is not easy to distinguish it from the wretched modern tenements which enclose it. It is situated in a street which bears the complicated name of the *Rue du Petit Lion, Saint Sauveur*, not far from the Halles, or central market of Paris. The great hall or chamber of the Donjon, as well as other apartments, has been converted into a private residence, by means of partition walls and false floors, but the stonework of the original building, which was extremely solid, the vaulting of the roof, the turrets, parapets, and even the machicolated embattlements, although at present masked, are nearly entire. The grand staircase remains

almost as it was left by the builder, and is a remarkably fine structure, and peculiar as regards its decoration. The steps surround a central column of granite; on the top of the column is a simple capital, which supports a kind of round stone tub, bound with three pairs of hoops, and from this tub springs an oak tree, whose branches mark out the vaultings, and cover the surface with their foliage. From the angles of the walls spring other branches of oak foliage, which meet and interlace with the former. This staircase is engraved in a well-known and very useful little architectural and archæological guide-book of Paris, of which, however, we do not remember the author's name. On one face of the building is an escutcheon, on which are represented a mason's level and plane; these are memorials of the rivalry of the houses of Orleans and Burgundy. The Duke of Orleans had adopted for his device a knotted stick, like the "ragged staff" of the great Earl of Warwick, with the motto "*Je l'ennuie.*" The Duke of Burgundy retorted by setting up a plane, meaning, we presume, that he would shave off the knots of his rival's staff, and he added, moreover, a *règle*, or level, to indicate that he intended to regulate matters in his own way. Monstrelet says that on new-year's day, 1410, the Duke of Burgundy presented to all the cavaliers in his suite and to the numerous clients under his protection, badges in the form of small levels, made, some of gold and some of silver gilt, with a small golden plummet suspended to them. These new-year badges were worn as decorations, so that the rejoinder to the bravado of the Duke of Orleans glittered, no doubt, on many a manly breast. It would be an act worthy of an iconoclast of the darkest age to allow such an interesting monument as this in question to be destroyed, and it is hoped that the Donjon of *Jean sans Peur* will be restored, and encircled by a public garden like the beautiful tower of *Saint Jacques* in the *Rue de Rivoli.*

A piece of very interesting solid Roman wall was discovered the other day, at a depth of about ten feet below the surface of the soil, in making the excavations for the new portion of the Rue Bonaparte in Paris. The workmen had great difficulty in removing this old masonry, and while doing so found a small, but very thick, gold coin, in admirable preservation. It bears on the obverse the head of Nero, with the inscription NERO CESAR AVGVSTVS; and on the reverse a goddess, seated on a curule chair, holding an orb in one hand and a cornucopia in the other, with the motto CONCORDIA AVGVSTA.

An interesting though not very important discovery has been made beneath the ruins of buildings which were erected within the famous Roman amphitheatre of Nîmes. A stone was found embedded in a basement wall, and bearing the following inscription:—

T. CRISPIVS REBVRRVS FECIT.

It is believed that the name on the stone is that of the architect or builder of the amphitheatre, as it appears by other inscriptions, previously found, that the *Crispii* were a family of ancient artificers of the place. In the same ruins was found a slab of marble, on one side of which are sculptured the heads of Silenus and a Faun, with a small altar; and on the other a youth, supposed to represent Ganymed, offering the bird of Jove drink out of a cup. The sculpture is said so be very fine.

Accident has brought to light a quantity of antique jewellery in the ruins of the château of Cerbastro, in the gorge of Ucos, between France and Aragon. A violent storm threw down a large piece of wall, and laid bare a series of sepulchral chambers of the Gothic period. Fortunately the examination was conducted with care, and a large quantity of jewellery of various kinds has been collected. It includes diadems, bracelets, rings, pins, and small ornaments of all kinds, the diadems resembling somewhat the very curious golden votive coronets brought from Spain some few years since, and placed in the museum of the Hôtel Cluny in Paris. The art works of the Visigoths are extremely rare, and this discovery is, therefore, very interesting and important, as aiding in the illustration of the material civilization of the period.

A farmer in the highlands of Riottier made a lucky pick the other day. He struck against something hard, which proved to be a thick earthen pot, containing a quantity of silver money. The coins are of the times of Henry III. and Louis XIII., and are likely to be of value in the history of the famous wine district, known as the Beaujolais, for the lords of Beaujeu possessed a strong place in the locality of which the mamelon may still be seen commanding the Saône and the neighbouring roads. The mere value of the coins as metal amounts to fifty or sixty pounds, and their artistic value is great, not only from their rarity, but also from their excellent condition.

A place of burial, supposed to be a Merovingian cemetery of the seventh or eighth century, has been discovered by the Abbé Cochet, an enthusiastic archæologist, at a place called Petit Appeville, near Dieppe. A small hill had been levelled for purposes of cultivation, and a number of bones discovered, and the proprietor of the ground having placed it at the disposal of the Abbé for examination, ten days' work brought to light twenty sepulchres, containing the remains of men, women, and children. All the bodies lay with their head towards the north-west. Ten of the skeletons had black vases at their feet, three had bronze rings on one of the fingers of the left hand. Four or five had, about the waist, plates of chased bronze, which bore the remains of silver plating, while many more had clasps of damascened iron. But the most interesting article discovered was an ear-ring, composed of a large copper ring, with a pendant, consisting of a composition ball covered with golden scales, ornamented in filigree, and having small glass tubes with bulbs attached. There was discovered also a small chain, composed of alternate links of iron and copper, and which had been enclosed in some kind of tissue. The articles discovered will be deposited in the museum of Rouen.

THE PARIS EXHIBITION, 1867.

THE works for the next Great Exhibition are being pushed on with great activity. The Champ de Mars, the scene of so many brilliant shows, and of some follies, is undergoing a complete metamorphosis, and the mere preparatory labour has been enormous. It must be remembered that the site is three times as large as that of the London Exhibition building of 1862; that the ground was some feet lower than the surrounding roads; in fact, just level with the river, and—which is almost a supererogatory statement—utterly undrained. To convert this desert into a fit place to receive a palace for the wealth of the world, besides receiving the world himself, as well as his wife, was the problem which the Imperial Commission, the architects, contractors, and navvies, had to solve without loss of time.

The first thing, of course, was to raise the whole to the necessary level, and to do this the authorities hit upon an admirable plan. On the opposite side of the Seine stands, or rather did stand, the "Heights of the *Trocadéro*," a considerable eminence which lies between Paris proper and the well-known little town of Passy, dear to English residents. The *Trocadéro* has long been the despair of the imperial and municipal authorities, who at length determined to cut off the excrescence and throw it into the *Champ de Mars*; a single line of rails was laid down from one to the other, passing over the bridge that separates them, and which has been divided by palings for that purpose, and the stuff from the *Trocadéro* carried to the hollows of the *Champ de Mars*, at the rate of sixty, or more, truck-loads per hour.

The preparation of that portion of the ground which the building is to occupy has been completed for some time. The whole of the passages for drainage and ventilation, the latter being large enough to drive a coach through; the great range of cellars under the outer gallery, which is to contain, not only the exhibition articles of food in their crude state, and in various stages of preparation, but also all the restaurants, cafés, and other places of refreshment; together with the masonry, which forms the foundation for the iron portion of the structure, are finished. The huge columns of the great machinery court—which will be more than a hundred feet wide, and upwards of eighty in height to the girders, and will form the most remarkable portion of the building—are being reared rapidly in pairs, several of which are now connected by their curved girders, and look like the framework of triumphal arches for the passage of a giant army. The other portions of the iron work are also in hand; and the walls of the two inner galleries, to contain the fine art and retrospective collections, are nearly half finished. These two galleries have been built of stone, in order to exclude, as much as possible, not only dust, but noise. The position of the various parts of the building, the principal avenues, and the inner garden, can now all be traced with little difficulty.

The trucks are constantly passing over the *Pont de Jéna* with the *débris* of the *Trocadéro*; but this is for the formation of the subsoil of the park, where, however, the earthworks are approaching a conclusion.

All the world knows by this time, we presume, that the Imperial Commission has for its honorary president the Prince Imperial, son of the Emperor, with the Minister of State as the acting president, the Ministers of Commerce and of the Beaux Arts for vice-presidents, and M. Le Play (who acted in the same capacity in Paris in 1855, and in London in 1862) as Commissaire-Général. We presume also that it is known, almost as generally, that the building is to be of an irregular ovoid form—in fact, a short body with semicircular ends; that the classes are to be placed in concentric divisions, galleries as they are called—the building being, however, all on one floor, an immense advantage—commencing with the Fine Arts and ending with Machinery; and that as each exhibiting country will have a space enclosed between two radii—a slice as it were of the great international cake—each will have a portion of all the concentric galleries; thus visitors will be able to examine the contents of the Exhibition either in geographical or systematic order, as may best suit their purposes or their inclinations.

The Universal Exhibition of 1867 will surpass all its predecessors not only in actual extent, but also in the comprehensiveness of its design; it will include all that was comprised in former plans, and several important features in addition. As regards the former portion of the programme, little need be said: there is no doubt that the classes of raw materials, tools, machinery, and manufactured products, as well as that of the Fine Arts, will all exhibit a proportionate amount of progress; and the applications for space have been greatly beyond the capacities of the building.

As regards the new features, they nearly all relate to art, science, and the condition of the labouring population of the world, and therefore present many points of especial attraction for the readers of Nature and Art.

The site devoted to the Exhibition is a parallelogram rather more than 3,250 feet long by 1,365 feet wide; the building will measure about 1,600 feet by 1,250 feet, and in consequence of its rounded form a very large space of ground will be left unoccupied. Moreover, the inner wall of the building will circumscribe a garden more than 500 feet long by nearly 200 feet broad. This large extent of park and garden will afford means which former Exhibitions have only possessed to a very small

extent, for the exhibition of objects relating to natural history, agriculture, horticulture, acclimatization, rural matters, and manufactures requiring a considerable space, isolation, or both. The programme includes an exhibition of horses, cattle, and domestic animals; but, as breeders would be deterred by the long period of seven months—the Exhibition being announced to open on the first day of April, and to close on the last day of October,—it is arranged that animals may be exhibited for short periods only, and be replaced from time to time by others of the same class and from the same localities. The exhibition of living animals will therefore be permanent, while the animals themselves may be frequently renewed. Amongst other matters in this class which are likely to present peculiar attractions is the rearing and management of silkworms, in which the French and Italian departments will be especially prominent; and side by side with the insects of Europe will be shown those of India, China, and Japan, which feed on the leaves of the mulberry, oak, ailanthus (or Japan varnish tree, as it is erroneously called), jujube, and castor-oil plant. This portion of the Exhibition will be all the more interesting from the fact, that the Ailanthus and other worms, some of them as large as a man's finger and exquisitely beautiful, will be seen in the open air, and may be studied as in a state of nature. Naturalists visiting the Jardin d'Acclimatation in the Bois de Boulogne, and the experimental establishment of M. Guérin-Méneville at Vincennes, may have seen these creatures in their normal condition, but to the public generally the sight will be novel and interesting.

As the production of honey and wax is one of the most universally extended occupations, the comparison of the various systems employed therein cannot fail to be suggestive. The honey of Hymettus has lost none of its celebrity, though more than two thousand years have rolled away since its praises were first sung. It figured at Kensington in 1851; perhaps the bees themselves may appear in the *Champ de Mars* next year.

In Horticulture our neighbours, being at home, will have a great advantage over their visitors. The moment the ground can be prepared to receive them, the French gardeners and horticulturists, with the Imperial Societies of Agriculture and Horticulture at their head, will lay out their plantations and parterres; and they have done so much of late in acclimatization of plants, and the floral decoration of public pleasure-grounds, that we may look for an extremely interesting exhibition in this class on the French side. The system of transplanting large trees, so successfully employed by the late Sir Joseph Paxton, has been carried out to a great extent by the authorities of Paris, and there is no doubt that some daring feats of this kind will be exhibited in the planting of the ornamental portions of the Exhibition Park.

We have been favoured with a view of the draft plans for the Horticultural Exhibition, to which one corner of the park, equal to about twelve acres in extent, has been devoted; and we may mention that they include the great aquariums, about which some extraordinary statements have been made. The arrangement adopted falls little short of the rumours to which we refer. There are to be aquariums both for fresh and salt water fish, and each will be connected with a cascade, which in the former case will serve to aërate the water to be pumped back into the aquarium. The tanks are to be of great size, and to be so constructed that the public may pass beneath them, and thus view the fish from below as well as above. The management of the horticultural portion of the Exhibition is entrusted to M. Barrillet Deschamps, the chief gardener of the city of Paris, and it could not be in better hands. We are glad to find that the British horticulturists have accepted the invitation of the Imperial Commission, and will co-operate with their French brethren in this interesting section of the Universal Exhibition.

Model farm-buildings, cottages, and rural constructions of all kinds, will be encouraged in every possible way, and it would be disgraceful to England and Scotland did they not take up a prominent position in this class. They have not, perhaps, very much to learn of others in this department; but, to put the matter on the lowest ground, it would be doing an injustice to Great Britain not to let the world at large see how much economic science and philanthropy combined have effected for the well-being, moral as well as material, of her agricultural class, which is perhaps the best fed, the best housed, and the best provided for in every way, in all Europe. If in one corner of the Exhibition Park there be not a model English farm, and a model English cottage or two, with rose-clad porch and garden-patch—things scarcely known on the Continent—one chance of correcting an error that exists pretty generally abroad respecting the habits of our island will be lost. We are looked upon as the most matter-of-fact people in Europe, and it would be well that our neighbours should know that the rural districts of England are as remarkable for the production of ornamental flowers as for that of heavy crops.

A variety of the most important national industries dependent upon agriculture, besides those already mentioned, will, of course, be represented. The French department will, doubtless, be highly attractive in this respect, and will include model establishments connected with the manufacture of wine, the production of sugar from beetroot and other substances, sugar-refining, brewing, distillation, the extraction of perfumes, the manufacture of fancy soaps, the preparation of fecula, maccaroni, vermicelli, and other processes for the preservation and preparation of food, to which chemical science has been largely applied by our neighbours.

The river Seine will flow past the door of the Exhibition, and a canal is now being constructed in the future park for the supply of water for

industrial and ornamental purposes. These waterways will afford admirable opportunities for the exposition of anything connected with maritime art, fisheries, and aquatic sports; and this is another class in which it is to be hoped Englishmen will occupy a worthy place. Will not some enterprising individual—if not our noble National Life-boat Institution — undertake to send an English life-boat with its crew and all accessories complete? Few things would do us greater honour, or be likely to confer greater benefit in the way of example.

Another feature, interesting to the whole world, is that of the illustration of the purely manual trades, including, however, not only those which defy the application of machinery—if, indeed, it be safe in this mechanical age for any one to forbid the intrusion or limit the powers of the lever, the inclined plane, and their offspring,—but also others which are now running a competitive race against those giants of the nineteenth century, the steam-engine, the steam-hammer, the power-loom, and the electric battery. It is the intention of the Imperial Commission to give all possible prominence to this group. They will show, if possible, the Indian weaving his exquisite shawls and fairy muslins; the Arab embroidering cloth and leather, and weaving camels' hair; the Maltese making those fairy chains and that minute filigree-work which are the despair of other nations; the Chinese carving their ivory balls, fans, and artistic woodwork; the American Indian fabricating his skin dresses and mocassins, decorated with beads and porcupine quills; and the natives of Panama plaiting those well-known hats, in presence of which the Italian straw-worker and the French basket-maker, able as they are, must yield the palm. In short, the Commission will do their best to exhibit all the manual arts, as practised by Asiatic and less civilized people, side by side with the most approved methods of working adopted by the artisans of Europe. This is a grand scheme, and although, doubtless, many links will be wanting, it cannot fail to supply a series of most interesting and instructive industries. In order to finish the picture, to render the story and the means of comparison more complete, the manual workers will be brought as far as possible face to face with those who compete against them with the aid of machinery. Around the grand gallery of manufacturing machines will be constructed a series of small workshops, in which the purely manual artisans will pursue their industry in their own manner, while their rivals, with the aid of the subdued monster, steam, will exhibit to the world how far they excel or fall short, as regards excellence of workmanship on the one hand, and rapidity of execution on the other.

Another new feature is the introduction of the historic element into the industrial department. A magnificent exhibition of retrospective art, founded upon that wonderful collection seen at South Kensington in 1862, was held last year in the Champs Elysées, when the great collectors of France contributed a most extensive and valuable series of specimens in metal, moulded, and woven wares, dating from the Flint Age to the century immediately preceding our own. Feeling that a great exhibition of modern art productions would be incomplete without the means of comparison with those of the past, the Commissioners have added another class to their programme, under the title of the "History of Labour," which, it is hoped, will comprise choice specimens of ancient art workmanship of every age and almost every country on the globe. The French section has been placed under the able management of the Comte de Nieuwerkerke, the Superintendent of the Louvre and of the Fine Arts; and the following are the subdivisions said to de decided on:—1. Gallic Art before the Metallic Period; 2. Independent Gaul; 3. Gaul under the Roman domination; 4. Productions of the Franks to the Coronation of Charlemagne in the year 800; 5. The Carlovingian Period, from the ninth to the eleventh century; 6. The Middle Ages, from the thirteenth century to the death of Louis XI. in 1473; 7. The Renaissance, from Charles VIII. to the death of Henry IV., in 1610; 8. Reigns of Louis XIII. and Louis XIV. (1610 to 1715); 9. Reign of Louis XV. (1715 to 1774); and, 10. Reign of Louis XVI., the Republic, the Directory, and the Consulate, to 1800. This retrospective class will occupy a special locality—a gallery immediately surrounding the central garden already mentioned,—and is likely to be one of the most attractive features of the Exhibition.

Literature and Science are also to have their place in the grand concourse. The Minister of Public Instruction, whose administration has been an unbroken series of strenuous and enlightened endeavours towards the improvement of all kinds of education—ordinary, ornamental, and professional,—suggested the admission of the scholar, the man of science, and the teacher, to the great gathering; and it has been arranged that reports shall be made by a select number of eminent professors in all the classes of intellectual acquirement, to be published by the Government as the contributions of Literature, Education, and Science. The object is to show not only what progress France has made in letters and the abstract sciences, but also what position is due to her, in comparison with the rest of the world, as respects her collegiate, professional, and common systems of education. Other nations are invited to take like steps, and Italy, for one, has determined to respond to the appeal, and put in her claim for one of the Academic wreaths.

Perhaps one of the most decided and generally recognized results of Exhibitions, great and small, is the fatigue of the visitor. The Imperial Commission intends to try the experiment of mixing the *dulce* with the *utile* to an extent not hitherto dreamt of, and thus to charm away at once mental and bodily weariness. As we have already said, the Exhibition building will stand in the midst of a large park, adorned with plantations and intersected by a canal. All the arts of the sculptor, the architect, the engineer, the iron, bronze, and

zinc founder, the mason, and the rustic carpenter, in addition to those of the florist and horticulturist, will be called into use to decorate the Exhibition Park with statues, fountains, picturesque objects, brilliant parterres, pleasant walks, and shady nooks; there is no doubt the result will be worthy of the occasion, and that the surroundings of the New Palace of Industry will present a striking contrast to those of its forerunners. But the intentions of the Imperial Commission do not stop here. Not content with providing their millions of visitors with a garden in which they may take their pleasure, it is proposed also to furnish the positive materials both of physical and intellectual enjoyment upon the most liberal scale.

The bodily wants are to be supplied by *restaurants, cafés*, confectioners' shops, and buffets for the sale of wines, beer, and other liquors, of every kind and country, each contractor being confined to the sale of articles, and the modes of cookery and preparation, peculiar to his country. The great wine districts of France are resolved to place before the world a supply of the wines of Burgundy, Bordeaux, Champagne, Mâcon, and the South, in unadulterated and perfect condition, and at fair charges. An Austrian establishment for the sale of the famous articles of Viennese bakery and confectionery is amongst those determined upon. There is little doubt that, in the British department, roast beef, chops and steaks, and a good glass of beer, will be forthcoming; and there is no question that the able caterers of gastronomic delicacies for the Parisian world will do credit to their well-established reputation. There will be little fear of being starved in the Great Exhibition of 1867.

Perhaps the greatest innovation of all is the introduction of dramatic and other amusements to take place not only during exhibition hours, but also in the evening, when, it is said, the gates of the park will be thrown open to the public—perhaps with a small charge for admission. In order to extend the universal characteristic to all the features of the Exhibition and its dependencies, it is proposed to have dramatic representations, operas, and concerts, by artists of as many countries as possible, and it is hoped that Italians, Germans, Spaniards, and Englishmen, will be found to represent one or more of the *chefs-d'œuvre* of their great dramatists and composers during the season. French dramas and operas will be easy of accomplishment, and negotiations have, it is said, been entered into with the managers of two Parisian establishments for the erection of one or more theatres and concert-rooms. The list of entertainments is to include, moreover, pantomimes, puppet theatres, and all kinds of *divertissements* tending in any way to illustrate the intellectual condition or the national peculiarities of various nations.

The very boldness of a scheme often ensures success, and this idea of combining amusement with business is eminently fitted to attract our neighbours and other Continental people who are so much more accustomed than we are to spend the summer evenings in the open air, and who consider the theatre, music, and other entertainments, almost as necessary elements of every-day life. In order to accommodate visitors, and enable them to spend as much time as possible in the Exhibition building and park, the subsidiary railways of Paris, which communicate with all the main lines, are being continued to the *Champ de Mars*, and trains will run from an early hour in the morning till midnight. This brings us to the grand question of the means of approach to the Exhibition, which in this respect also will have advantages which none other has ever possessed. The *Champ de Mars* is bordered by roads on all four sides, one of these being the broad highway that skirts the side of the river, while a fine bridge spans the Seine exactly opposite to the chief entrance of the park: thus the Exhibition will be accessible on all sides and in all directions by road, rail, and river, a combination of facilities, which are of infinite importance in such an undertaking. Lastly, arrangements are made to provide as far as possible against bad weather. The side entrances to the Exhibition will be so arranged that visitors may there descend from their carriages under cover, and the broad paths which will lead from the front and back gates of the park to the building will have covered arcades on each side.

Such are the principal improvements and most remarkable novelties that have been introduced into the plan of the great Congress of the works of Nature and Art for the coming year. The Imperial Commissioners seem determined to throw all that has hitherto been done of the same kind completely into the shade, and there is no legitimate reason to believe that they will not be successful in their undertaking.

Palmam qui meruit ferat!

G. W. Y.

THE DRAMA AND THE STAGE.

IF the Drama can be associated with Nature, the Stage ought to be classed with Art; but in the present state of theatrical matters, we fear that neither classification would be just. Our plays no longer represent human nature, although it is the chief aim of the existing stage to realize actualities. We have, indeed, fallen upon a strange conjunction of affairs as relates to the Drama; for while there is a loud call for real tables, real chairs, real carpets; clocks that will go; looking-glasses that actually reflect; real silks and satins for the women's dresses; coats made by Poole; and even for real horses and dogs on occasions: yet there is no call for real human emotion, nor a true and deep exemplification of human nature. There is an amazing desire in audiences to see the real outside of everything; and the caterers for the public, the managers—who are always amongst the most supple of creatures—pander to this demand with even a reckless extravagance. Go where we will amongst the twenty-three theatres that minister to the amusement, as it is courteously termed, of London, we find a strenuous effort made to produce on the stage strong realities. At one theatre we had a real fire-engine, drawn in with real horses, to put out a fire, which is so real that it literally consumes a good deal of inflammable paper. This is for the genteel people at a theatre named after Royalty—The Princess's. At another, peculiarly devoted to the people, but taking the highest name in the land—The Victoria—reality is still further intensified, and in one piece may be seen a *fac simile* of a casual ward; a section of an hospital; a prison scene; a fire; and a real railway engine and train. We hardly know how realization can go further. Yet the genius of a former generation must not be forgotten, for Mr. Bunn, at the classic and historic theatre of Drury Lane, once opened a way into the veritable street, and showed the actual coaches and carts passing, to the excessive delight of the audience of a theatre always supposed to be devoted to the legitimate drama.

But we should not object to this extraordinary rage for realization, if it were also extended to the exemplification of human beings and to some illustration of human character. But let us walk into the first theatre we come to, say the Olympic, and test how far the principle is carried out. The newest play there, Love's Martyr, is an adaptation by Mr. Leicester Buckingham, of a French play by Monsieur Soulié. Here the manager provides us with everything real and in good taste; and the French author takes great pains to keep within the leading canon of the modern French Drama, that the language shall be strictly confined to the carrying on the action of the piece; and to this canon the English adapter most precisely adheres. By this means it is supposed that the Drama fulfils the grand office for which it is said it was created, to show a series of events woven into an exciting story. The consequence is that all mental development is abandoned; all the internal conflict of emotion is left undeveloped; and the figures pass before the audience real as to clothes, and real as to speech as far as it goes; but with no more of their inward human nature shown than one could learn in a thronged thoroughfare where a suicide, a murder, or any other catastrophe had taken place. The personages of such a drama have indeed certain coarse outlined characteristics. There is a swell villain—a mild gentleman—a murderous usurer—a jealous husband—an agonised wife—a silly artist—who has a vulgar wife. But of all these people we know nothing by their own revealment beyond a surface manner, for they avoid soliloquies; and none of the old and antique dramatic expressions is allowed, that would show us their minds, their reasoning, their impulses, and their feelings. We only see their actions; we are only interested in the events; and as to the illustration of human character and the display of that endless variety of human disposition that is constantly occurring, we are told that it is beside the office of the drama to portray it; and that to attempt to do so only leads to endless absurdities and prosing. Inhuman as are the painful efforts made to avoid what this class of writers for the stage call absurdities, they fall into much greater. Thus while all is outwardly real in such plays as Love's Martyr, we find that the conduct of the personages is most unreal, strained, and unnatural. One word spoken would have put an end to all the agony of the heroine of Love's Martyr; while we only see her suffering in the outward spasmodic form of action. She is much less real than Juliet, who shows us, in frequent soliloquies, the agitation of her soul.

It is well we should put to the test the new doctrine, that action only is to be shown on the stage. Were this so, all the classic and almost all the elder English drama would be swept from the stage. And the triumphing answer of the real school—the literalists, the authors of the French drama *par excellence*—is, "it *is* swept from the stage." And yet in to-day's bills are announced, Hamlet, Macbeth, Katherine and Petruchio, Henry VIII., Lady of Lyons, The Rivals, The School for Scandal, Richelieu, and the Winter's Tale, to be performed, and mostly at minor theatres. The truth is, the mind will ever seek an exposition of itself, and whatever the realistic writers may say, there always will be a reaction towards the poetical and character drama. It is indeed from a want of fully comprehending the words which give a title to our own publication that these fallacies arise. Nature and Art are both imperfectly defined and understood. Nature extends her powers further than to actualities, and works with a principle in many things that are the result of art. The nature of art, if it may be permitted for a moment to use the phrase, is not a nature we see exemplified in any actual objects; but it is the ruling principle which forms a new set of objects, things, and occurrences. It would be a misuse of language to say that the fairies or the ghosts of Shakespeare, or of any other poet or inventor, are natural; yet they most undoubtedly seem to have a nature of their own, by which we are moved or interested. To talk, therefore, of nature (thereby meaniug actuality) being a sort of art, is to confound the object and the operation of imaginative work. To seek to reduce the imagination to a mere inventive faculty to involve and evolve a series of facts into an exciting story, is to make an angel do the work of a journeyman. It is, in truth, to reduce art to artisanship.

Such, however, is not only the office of the present drama; but it is proclaimed to be the only office, and the only mode of treating it. The result is, that the poetical, the expanding, the analysing mode of the poetical drama comes to be treated by fanatical and ignoraut realists, as a mass of absurdity, and burlesque arises as an expression of this feeling. Juliet's agony is parodied; as are the disquisitions of Hamlet, the soliloquies of Iago, the subtle reasonings of Richard. The Antigone becomes a farce, and every subtle delineation of human character is derided as a prosy surplusage. But the Real never has, and never will, satisfy human nature, which is ever consumed with an insatiable desire to pry into itself, and which always hails all lights, whether direct or reflected, that will help to illustrate the ever-varying human soul. Thus the classic and the Shakespearian drama "will rise," though realistic burlesque writers "would overwhelm them to men's eyes."

Hereafter we shall illustrate our theories by a rigid examination of the novelties of the theatres.

A WEB of SUMMER GOSSAMER

PARISIAN CHAPEAUX.

My Dear Mr. Editor,—Allow me to offer you for the first number of Nature and Art, a true woman's contribution, a chapter on Bonnets. They say the men have all lost their heads on the Continent, and that there is no knowing what may happen in Germany and Italy. If the ladies have not lost their heads, they have almost ceased to provide bonnets for them, although they do wear certain gossamer fabrics sometimes no bigger than the palm of the hand, to which it is rather daring to give the name of *chapeaux*. However, no matter what they are called, so long as they look pretty. I send you ten portraits, both lady and *chapeau*, in some instances from the life; but you must excuse my telling you which of the faces are real, and which imaginary. It is enough, I think, to assure you that all my sketches are those of real *chapeaux* that I have seen on the racecourse, in the Bois de Boulogne, in the Champs-Elysées, and other promenades during the first week of this present flowery and, I may add, showery month of May.

I do not know exactly what my own dear countrywomen are wearing on their heads just now, but I challenge them to produce ten specimens, except from the secret drawer of their fancy, to outdo those which I have the pleasure of now sending you.

Fig. 1.

Chapeau Benoiton, so named after the heroines of Victorien Sardou's successful play at the Vaudeville. A pink *fanchon* formed of *bouillons* of tulle, ornamented outside with a moss-rose. Inside is placed a *torsade* of pink velvet with three cameos linked together by a jet chain. The *brides* are of *taffetas*, with long *barbes* of pink tulle, fastened by a rose beneath the chin. A *chaine Benoiton* in jet is attached to the *chapeau* just over the ears, and falls in festoons over the *brides*.

Fig. 2.

A charming *capote* composed entirely of violets; a chain of the same flowers falls upon the *chignon*. Green *brides* with a small bouquet of violets on the bow. A fringe of glass drops ornaments the front.

Fig. 3.

The *Papillon*, a very dashing *chapeau*. Tiny *bouillons* of white tulle radiate from the centre, whereon is posed, with its wings outspread, a beautiful yellow butterfly. A wreath of forget-me-nots ornaments the edge of the *chapeau*, and the *bouillons* are dotted with these sweet little flowers. The *brides* are of pale blue taffetas.

Fig. 4.

No. 4 is a pretty Leghorn hat, *forme Japonaise*, so much *à la mode* just now. The only ornament is a delicate garland of roses, *pompons* and leaves.

Fig. 5.

A small *chapeau* in fancy straw, christened the *Pamela*. Round the edge is placed a wreath of small, bright-red poppies, and the *brides*, instead of being attached in front, pass round under the *chignon*, and are tied behind.

Fig. 6.

A charming *fantaisie*—which we will call the *Berger*. Very small, very simple, very becoming to a pretty brunette. A tiny circle in Leghorn, surrounded by a wreath of fairy damask roses. The long cherry ribbon which forms the *brides* passes over the *chapeau* and is attached under the hair.

Fig. 7.

A delicious spring *chapeau*, *forme Japonaise*, entirely covered with the beautiful lily-of-the-valley, whose sweet, white bells mingle gracefully with the curls of the coiffure. Long *barbes* of white tulle, tied beneath the chin, make a charming substitute for the everlasting taffetas *brides*.

Fig. 8.

A delightful composition of guipure and tulle, embroidered with white bugles; a fringe of the same is placed all round the chapeau. The strings are in white satin.

Fig. 9.

The *toque Chinoise* in Leghorn. The novelty in this hat is the pointed crown, for we have seen the green velvet *bordure* and seagull's wing many times before.

Fig. 10.

A grey and white fancy straw *capote*, edged with a garland of double violets, and attached beneath the chin by straw-coloured taffetas.

Should my notes on *chapeaux* be acceptable to your lady readers, I shall be happy to send you from time to time a few other jottings. K. E. F.

ART NOTES FROM FRANCE.

By G. W. Yapp.

IT will be a dark day for art when the moderns shall cease to study the works of Michael Angelo, Raphael, and the other grand old masters; but it is a promising sign that the worship of certain styles, the slavish imitation of certain manners, the servile prostration of the artist of the present day before the masters of the past, is melting away in the warm influence of free thought and extended knowledge. Few nations have exhibited a more extraordinary combination of practical ability and pedantry in art than our able and sprightly neighbours, the French. Having acquired great power in the delineation of the human figure, considerable skill in composition, and marvellous facility in execution, French artists remained for years chained to the car of some great, and not unfrequently of some little, master, whom they followed with blind zeal, until accident raised up another in his place, whom they followed in turn with the same zeal and the same slavishness. There still exists much of this classic mania, this adherence to a model, this absence of independence, amongst the artists, connoisseurs, and critics of France, but considerable improvement has taken place during the last few years; some of the idols have been examined, found unworthy, and cast aside, and if some new ones have been set up in their place, the fetishism is not so absolute, and an artist or critic may now think for himself in art without being denounced as an infidel.

Much of this happy change is due to the daring though incomplete genius of Eugène Delacroix, who, if he could not succeed in embodying on canvas all his own ideas, exhibited a determination, at the very outset of his career, not to be the slave of the ideas and opinions of others, and never swerved from it while his hand could hold a pencil. Delacroix saw that what were called the grand or the classic styles were either lifeless or theatrical; that the colouring of the French school was flat, conventional, pedantic; and he dared to compose according to his own notions, and to colour, as faithfully as he could, after Nature. His first pictures were received with shouts of derision, or shrugs of contempt: he possessed less power in delineation than many artists of his own standing; his colouring was not only totally inconsistent with the dogmas of the schools, but also evidently fell far short of what he himself intended; and in spite of the rapid advancement of his talent, his daring, uncompromising originality had to struggle for many years against the vogue for pictures as cold, correct, and soulless as his own were warm, faulty in detail, and imaginative. But Delacroix combined perseverance with genius; he bent himself to his work with the determined energy that arose from a conviction of power; he painted down the scoffers, he interested the sceptical, and at length the conventionalists were beaten, and admitted that he was a genius, though incomplete and wayward. When he died he enjoyed one of the highest reputations in France; and after his death his slightest sketches were sold to enthusiastic connoisseurs for fabulous sums. Nor was the demand for these sketches a mere fashion or mania. Delacroix left comparatively few finished pictures; his greatest works are on the walls and the ceilings of the churches, the Hôtel de Ville, and the Louvre, but many of his so-called sketches were exquisitely finished works, almost as much superior, in an artistic point of view, to those for which they served as guides, as the cartoons of Raphael must have been to the tapestry which was worked from them. We have been present at the exhibition of the collected works of many painters, but we never witnessed such genuine enthusiasm as that which was called forth by those exquisite first draughts. It was, to a large portion of those present, a revelation of genius.

Posterity will probably not place Eugène Delacroix in one of the highest niches in the temple of fame, but he undoubtedly deserves a position parallel with that occupied by Samuel Johnson in English literature; he broke the bonds that confined his class, and asserted with heroic determination and a large amount of success the freedom of genius, the liberty of independent thought. The man who did this was a great artist, although his most ardent admirers would not compare his works with those of a Raphael or a Leonardo da Vinci.

Others have since aided the good work begun by Delacroix for his epoch, and, in many respects, no painter has been more successful in the same course than the late Constant Troyon, the sale of whose works has recently created a great sensation in Paris.

A few years since, a painter of landscapes or animals, or both, was scarcely admitted by French critics to be an artist, the rank awarded to him was somewhere between the last miniaturist and the first sign-painter. That there could be anything worthy of the attention of an artist born in a country that possessed an academy of art and a host of traditions, in transferring to canvas or paper the vulgar elements of rural scenery, was inconceivable in the opinion of the great mass of the learned in such matters; unless, indeed, certain grand personages, such as Venus or Diana, Apollo, Pan or Silenus, Dido and Æneas, Solomon and the Queen of Sheba, were introduced, when the painting became a *classical landscape*, although the inhabitants of the mythical regions, of the balmy South or of the glowing East, might be introduced half, if not wholly, undraped, amid the gnarled oaks or the frigid pine-trees of our colder climes. And even when the work had thus paid toll, and passed the academic gate, if the artist exhibited too much fondness for Nature, and dwelt too lovingly on sunrise and sunset, instead of *putting them in* after the rule of the schools, the critic would shrug his shoulders and say — "No doubt the man has talent, but what a pity it is that he allows it to run riot, and offend all the established rules of classic art!" Want of originality or dread of the critics caused most landscape-painters to follow tradition only too closely; they copied the peculiarities, the handling, the tricks of the artist in fashion, until their works were as unlike anything in Nature as if they had been executed in Berlin wool. The woolly school has still its adepts in France, and hosts of admirers, but it is gradually giving place to a far more natural style.

The French, until very lately, knew extremely little about the condition of the English mind, and the great and well-grounded admiration which we expressed for the works of Claude Lorrain gave our neighbours but a poor opinion of our critical acumen. The case is considerably altered now: we have helped to teach our neighbours the value of one of their most original and brilliant artists, and in this we have done them a service for which they owe us a debt of gratitude; for one of the problems of the French school of the present day is to discover how Claude created his glowing sunsets, or flung the silvery haze of morning over earth and sky; and, slow as may be the approach towards his glorious touch, every step on the road is a prize for modern art.

Constant Troyon was born, lived, and died almost in sight of the famous porcelain works at Sèvres. He received his artistic education from a painter in that establishment, where everything was classical; the idol might be Raphael, or Correggio, or Watteau, or even Lancret, but an idol there must be, and he must be followed implicitly, or there was no art in the matter, but simple barbarous daubing. It was a grand proof of the original genius of Troyon that, after having been educated

under such a *régime*, he should have become one of the most daring of reformers. But at the moment when he was issuing from the little world at Sèvres, to commence the battle of life, he fell in with Diaz, and other clever artists of the new generation, who had already emancipated themselves from the bonds of classic tyranny, from the frigid rules of the Academy, and declared that Art was a thing to be studied directly, and not, as it were, through media that produced a double refraction. Naturally startled at such heresy, Troyon at first stoutly defended his early faith; but he soon began to reflect seriously upon what he heard; he put the arguments of his new friends to the test of actual experiment, sat down in the spirit of true devotion at the feet of Nature, and soon became her ardent devotee. It was not long before he declared openly and positively that in future Nature should be his idol, and his own convictions his sole Academy. The grief of his family and early teachers at his defection caused young Troyon poignant suffering; but it was not a matter of will, but one of absolute and inevitable fate: he was convinced, and he could not retract. He refused absolutely to accept any of the dogmas presented to him; he renounced any pretension to classicality, or any other scholastic *ity;* he would not even set up for an animal-painter or for a landscape-painter, attach himself to any class, or bind himself by any bonds whatever; but simply went out into the presence of Nature, pencil in hand, studied intensely all he saw, fixed upon whatever attracted his sympathy, and used all the art which he had acquired by laborious practice to fix his impressions on his canvas. He declined to copy any more mythological beauties, or to study any more classical groups, and flung himself, according to the opinion of the instructors and friends of his youth, into the yawning gulf of vulgar *realism.*

As regards the outer world of art, he had not to struggle against the fierce tide of opposition which met Eugène Delacroix and would have engulfed any less vigorous and less determined swimmer. In the first place, Troyon came before the critics a few years later than Delacroix; and, secondly, he was, in the eyes of the great critics, a mere strange animal-painter, with some attempt at landscape in the way of background; he did not trench upon classic ground, he belonged to the outsiders, and was considerately tolerated as a man with certain abilities of an inferior class. He was therefore successful, or rather not unsuccessful, at the very outset of his public career; but his genius expanded gradually; he went on step by step, and the last picture that he exhibited was perhaps the best he ever painted. He gained his first prize, a third-class medal, in 1838; one of the second class in 1840; first-class medals in 1846 and 1848; and in 1849 was decorated with the Cross of the Legion of Honour, having thus firmly established his reputation within a dozen years from his first appearance in public. After this, his popularity grew rapidly; he was awarded a medal at the Universal Exhibition of 1855, and his pictures always attracted hosts of admirers at the Paris *salon.* He painted animals as few have ever painted them—not so grandly as Paul Potter, or Rosa Bonheur; not so poetically, nor so exquisitely as Landseer: his cattle, sheep, and dogs are every-day working animals, with the dirt and the wear upon them; but they are all living, breathing, real creatures. His landscapes are at once solid and bright, real and poetic; his atmospheric effects are marvellous, and raise his works into the high domain of poetic art. His sheep going to market in the morning are enveloped in an atmosphere of mist and dust, glorified by the first rays of the rising sun. His oxen returning from labour trudge home heavily, weary, soiled, and reeking in the evening air. His pictures are not only true to Nature, but complete, harmonious, and stamped with the true seal of genius.

Troyon's works sold so readily that few of his finished pictures remained in his own possession; but the exhibition of his minor productions created intense interest; the sketches, mostly completed in the presence of Nature, were eagerly disputed, and the sale realized half a million of francs (£20,000).

In spite of a naturally weak constitution, Troyon's industry was enormous, and failing health only made him more determined to push on his work. He was threatened with blindness, and avowedly applied himself more and more intensely, in order, as he said, to take all possible advantage of the remaining *light.* He died at an age when most great artists are only entering upon the last phase of their career, upon their last manner; but he had doubtless done his work, and to the very last moment when the palette fell from his weary hand, he never abandoned the mistress to whom he had sworn allegiance in the first glow of his intellectual maturity. He never quitted Nature and Art to dance attendance in an ante-chamber, or to woo the reigning idol of the hour; yet he left behind him such a fortune as few artists have amassed. He who can thus stand alone, be true to himself, and earn the applause of all whose praise is worth having, is, whether his style and his subjects be grand or modest, classic or realistic, a great man and a great artist.

The Comte de Nieuwerkerke has brought to light an authentic portrait of the Duchesse de la Vallière, by Mignard, which is considered to afford conclusive evidence that not one of the current portraits of the lady is a likeness. Such is the opinion of critics well qualified to judge, and, amongst the rest, of M. Eudore Soulié, the keeper of the Versailles gallery, where a copy of the picture in question has lately been exhibited. The portrait represents Madame de la Vallière at the moment when she is resolving in her own mind to quit the court for the convent; she is dressed with all the luxury of the period, but a rose in her hand lets fall its petals on the table, a mask, cards, and trinkets lie scattered on the floor, a book of devotion is under the favourite's hand, and on the base of a column are inscribed the words, *Sic transit gloria mundi.* The two children of the duchess are

included in the picture—her daughter, who afterwards became Princesse de Conti, and little Louis de Bourbon, who was titular Grand Admiral of France at the age of two years. It is an important fact as regards the picture in question that the boy is dressed in a black velvet tunic richly decorated with precious stones and embroidery, which corresponds exactly with the recorded description of a dress worn by his sister, who was remarkable for her beauty, at one of the court balls.

A very curious question has arisen between the authorities of the city of Paris and a painter, M. Lehmann. Ten years ago two pictures were ordered by the municipal Commission of the Fine Arts for the Church of Sainte Clotilde, then building; the painter fell ill, and was unable to complete the works, which were finished by one of his pupils. The two pictures were eventually placed in the church, but M. Lehmann, on seeing them there, did not consider them worthy of him, and requested that he might be allowed to return the money and destroy the paintings. Whether the Commission will accede to the request is not yet known; but the incident is unusual and interesting.

A noteworthy change is about to be made in the arrangements of the Luxembourg. The gallery is devoted to the works of living artists, and they remain there until five years after the death of the painter, when they are transferred to the Louvre. A special room is now to be set apart for those of the intermediate stage; that is to say, for the works of those artists whose names have just become historical.

Nor will it be out of place to note here that another exhibition, open to the public under certain restrictions, has just been formed in the charming gallery constructed by the late Duc de Morny, at the residence of the President of the Corps Législatif. The collection consists of a number of works by foreign living artists, recently exhibited in an ill-lighted room in the Luxembourg, and of a selection of pictures by recent French artists, including Ingres, Rousseau, Troyon, Rosa Bonheur, Isabey, Fromentin, and others. Those amateurs who visit Paris this year will be glad of the information, and will find little difficulty in obtaining admission.

The amount of decorative work of all kinds lately executed in Paris is enormous. We hope, before long, to find an opportunity of pointing out the most important novelties; for the present we must confine ourselves to the mention of the new *Tribunal de Commerce*, opposite the *Palais de Justice*, which presents one of the best specimens of the time as regards interior decoration, including four large works by Robert Fleury, two of which are in place, and a good deal of admirable carving; of the façade of the new church of Saint Augustin, in the Boulevard Malesherbes, decorated with fifty or more statues, besides paintings on lava and ornamental sculpture; and the new staircase and *foyer* of the Théâtre Français, which have just been completed by the placing of fine statues of Mars and Rachel in the vestibule.

Strangers visiting Paris are surprised at the paucity of grand concerts in a city which deems itself intensely musical. The surprise is scarcely well founded. The opera public is not a concert public, and to say the truth, your true Parisian loves costume, decorations, and footlights. The Conservatoire is a nursery for the lyrical theatres, and much as it has done for singers and instrumentalists, it has done little for grand music. The concerts of the Association within the Conservatoire are famous all over the world, but the case is quite an exceptional one. M. Pasdeloup, the conductor of the Conservatoire band, is doing his best to induce a general taste for superior music through his popular concerts, which are well attended; the Government and the municipal authorities are also doing all they can for musical education; almost every common school in Paris has now a singing class for youths attached to it, and in many of the schools evening classes for adults are also held; the Prefecture of the Seine has lately issued invitations to composers to compete for an unlimited number of prizes to be given for good choral pieces to be used in these schools; and the Government has just established classical concerts for the especial benefit of the pupils of the high schools. At the first of these concerts, the pieces performed were quintettes by Mozart and Beethoven, a trio by Haydn, and several morceaux by Bach, Mendelssohn, and Spohr.

It is dangerous to predict what changes may occur in the tastes and habits of a people. French critics are actually beginning to find flaws in the porcelain of their own society; instead of the rather amusing self-laudations to which Europe has so long been accustomed, we have now and then fierce onslaughts on French art, French literature, and French taste. M. Henri Rochefort, who, by the way, had a small sword duel the other day with Prince Achille Murat, when honour was declared to be satisfied by the tearing of the Prince's shirt, and a slight flesh wound in the hip of his antagonist, has just penned a slashing criticism, and, as abuse of our friends and neighbours, even by one of themselves, is always more or less *piquant*, we will make a few extracts from the article under our hand:—"It is understood that the arts flourish in France: I ask nothing better than to be convinced of the fact; but good-will and patriotism have their limits, and it did not cost me a very long study to perceive that we were less artistic than any other nation, and that never, in any age, have we exhibited in painting, in architecture, in music, anything more than a certain facility of adaptation, in which originality had scarcely any share. The proofs of our musical impotence are superabundant. Except Hérold . . . . we have not had a single great composer who did not cast himself in the mould of Rossini or Mozart. As judges, our most celebrated dilettanti are below the lowest maccaroni-seller in Naples or Palermo; for each time that a *chef-d'œuvre* was given for the first time before a French public, it fell flat, and was only lifted up again after our

neighbours had taken the trouble to make us comprehend that we had hissed a wonder. *Guillaume Tell*, *Zampa*, *La Traviata*, *Rigoletto*, were condemned by the Parisian public with touching unanimity . . . . . In music our incapacity is great . . . . . In painting it is different; we know nothing at all about it . . . . . In painting as in music we have scarcely anything in France, we are nothing but copyists; and, for my part, I know only three veritable artistic temperaments amongst contemporaries. Delacroix, Diaz, and Troyon,"—and so on through two or three columns. M. Henri Rochefort lays his lash on with a heavy hand; but he is, I fear, right in the main. Thought, sentiment, originality, genius, are far less conspicuous in French artistic productions than facility, or what our neighbours call *chic*. But there are signs of improvement with respect to painting; Delacroix, Decamps, Troyon, and others, have nearly ruined the prestige of the pseudo-classical school, and if, amongst the idols of the day, there are some conventionalists, there are others who dare to see for themselves, and to paint what they see. Even Parisians themselves are beginning to laugh at the absurd stereotyped phrase—"*Il n'a pas de style!*" which is nearly equivalent to the old complaint against dramatic writers, who dared to neglect the sacred rule of the Unities.

Few French popular ditties are better known to Englishmen than the famous *Marlbrouck s'en va-t-en guerre*, and few persons have ever doubted that it related to "John, the great Duke of Marlborough," but it appears, upon the authority of Chateaubriand, François Arago, and others, that *Marlbrouck* has no more to do with Queen Anne's hero, than Lord Romilly has to do with French rolls. The original of the song is said to have been *Mambrow*, a crusader, and the ballad to have been brought into fashion by Marie Antoinette. There is little doubt, however, that the cap was slightly altered to fit, and it was well done; the hero of Malplaquet and Blenheim is still, in the minds of a great mass of Frenchmen, a kind of Hudibrastic figure.

THE ROYAL ACADEMY.

"BEAUTY, in all its highest forms, is calculated to impress on human beings the belief in a perfection greater than this world contains." Thus runs a passage from Sir C. Eastlake, affixed by the Academicians to the first page of their catalogue for 1866; and if they thereby intend to claim high merit for their ninety-eighth exhibition, we can only say that by no more inapposite quotation could they have challenged the verdict of the public. A man's imagination must be vivid indeed, if he believes that the pictorial beauty exhibited at the Academy is "in all its highest forms;" and no spectator can be impressed by any picture with a "belief in a perfection greater than this world contains." Certainly "The Widow Wadman laying Siege to my Uncle Toby," by Frith (73), is not "perfection greater than this world contains," nor is she the widow Wadman of Tristram Shandy. Inviting comparison, as this picture does, with Leslie's charming work, it is seen how much easier a skilled artisan, with the brush, can paint the wig than the face of my Uncle Toby. Sir Edwin Landseer's "Lady Godiva" (109) is essentially vulgar and commonplace, ill drawn, worse painted, and much too suggestive of the model. "A Chat round the Brasero" (132), by Phillip, R.A., like as the harridans may be to those of Spain, is far away from "beauty in its highest form or perfection greater than this world," or even Spain, "contains:" albeit in colour the picture has all the richness and brilliancy of the master. What supernatural beauty has that haggard and ugly nun (262), by Orchardson, who is telling "The Story of a Life"? What that story is no unprompted spectator can gather, except that it does not seem to interest the bevy of girls to whom it is related. Mr. Orchardson's portraits, exhibited the year before last, and his "Hamlet and Ophelia," of last year, gave promise not realized by this picture; but he has, nevertheless, merits which cause his future career to be looked forward to with interest and expectation. "Thetis," by Watts (23), is a charming little picture, and yet it is not exactly the ideal of the wife of Peleus and mother of Achilles. Still, as she had power to assume any form she pleased, and her wedding was honoured with the presence of all the gods except Discord, Mr. Watts may be right in his imaginative sketch. Bacon has said that the use of art and poesy "hath been to give some shadow of satisfaction to the mind of men on those points wherein the nature of things doth deny it, the world being, in proportion, inferior to the soul; by reason whereof there is agreeable to the spirit of man a more ample greatness, a more exact goodness, and a more absolute variety, than can be found in the nature of things. Art doth raise and erect the mind by submitting the shews of things to the desires of the mind; whereas reason doth buckle and bow the mind unto the nature of things;" and we must look for something besides beauty to fulfil the conditions laid down. Indeed, a highly original and competent critic on art, Proudhon, has said that "The attainment of beauty is only the *début* of the artist. There are the variety of human actions and passions, prejudices, beliefs, conditions, casts, family, religion, domestic comedy, public tragedy, national epic, revolutions. All as much matter for art as for philosophy." "Here Nelson fell" (47), by Maclise, is an illustration of public tragedy. It is the study for the truly noble and national picture painted in the Houses of Parliament, and worthily represents the hero's death, of which Napoleon said, "Bah! I won the battle of Trafalgar by the death of Nelson." It was about the middle of the battle when Nelson's ship, the *Victory*, fell aboard the *Redoutable*, and a slaughtering struggle took place, in which the superiority of the English ship and crew was manifest. The resistance of the enemy had almost ceased when Nelson fell; yet the carnage on the deck of the *Victory* was terrific, and Dr. Scott, whose duties confined him entirely to the cockpit crowded with wounded and dying men, relates that such was the horror that filled his mind at this scene of suffering that it haunted him like a shocking dream for years afterwards. Mr. Maclise's work now under notice, and the "Meeting of Wellington and Blücher," are two of the finest pictorial records any nation can boast of, painted, too, at a large pecuniary sacrifice. The artist has worked at them silently, year after year, absorbed in the grandeur of his conception and the magnificence of his work; and it may be said for him, as Rubens said for himself—"Every one according to his gifts. My endowments are such that I never wanted courage to undertake any design, however vast in size or diversified in subject." "Queen Elizabeth receiving the French Ambassador after the news of the Massacre of

St. Bartholomew" (364), by Yeames, is a very good picture. Elizabeth and her court are all in deep mourning. Her aspect is capitally represented, and the portraits of the statesmen who surround her are all good and well painted. Though they are distant from the spectator, the interest is centred in them. The figures and gay costumes of the French ambassador and his attendants are not very gainly or pleasing; but perhaps this is what the painter intended. They are the courtly representatives—to use the vivid description of Motley—of that "wolfish mob of Paris which lapped the blood of 10,000 Huguenots in a single night, and was again rabid with thirst." There is another historical picture relating to Paris, No. 396, by G. Fisk, "Waiting for the *Moniteur* Newspaper detailing the Arrest of Robespierre." It depicts an earnest and excited crowd of men and women waiting with French patience for the attention of the official newsvendor, and shows, at all events, careful study. "The last Moments of Raffaelle" (165), by O'Neill, has considerable merit, and shows that the artist has greatly improved in colour. The landscape seen from the window is very striking and solemn; but the features of the dying man bear no resemblance to those so well known and commonly received as Raffaelle's, nor does the creation on the whole convey the remotest impression of his character or his works. "The Poisoned Cup" (500), by J. D. Watson, is a striking *genre* painting of a most unpleasant subject.

The pictures on religious subjects are as few as a trading and commercial age might be supposed to require. "The Remorse of Judas" (101) and "The Parents of Christ seeking Him" (503), both by Armitage, are fine specimens of a powerful master unaccountably passed over in the new creation of associates. "The Child Jesus in the Temple," by Dobson (273), is pretty and sweet in colour, but feeble, to the last degree, in character. In fact, "Wayside Devotion, Brittany" (107), by Boughton, is a far more truly religious work than those painted professedly to represent Scriptural subjects.

Again and again, as we walk through the exhibition of the Academy, will the awkward question occur to us, whether painters who are hangers have been denied, or in virtue of their office, deprived of, the sentiment of magnanimity. Such a reflection has just been roused by what seems to us the sadly unfair "hanging" of No. 150, "Moonrise," by Daubigny. The picture is completely "skyed"—hung next the ceiling,—yet it is a noble work, so far as we are allowed to judge. "The Martyrdom of St. Stephen" (254), by Legros, is another instance of unfair hanging. The artist is a young Frenchman of very original and remarkable power. His works are well known for their tragic force and mystic effect. The figure and expression of the martyr-saint are clearly by no common hand. Mark Anthony, again, is one who has been persistently all his life oppressed by his brother-artists. He is a landscape-painter of whom England will one day be proud, but who, whatever his fame is or may be outside, owes nothing to the Royal Academy. Year after year, till the painter has grown grey, have his pictures been hung in the worst places. His "Peace of the Valley" (380) shows an ivy-mantled church standing on a rich and heavy green sward, with fitful gleams of sunshine flitting across the time-worn trees around. Mr. Leighton's pictures (Nos. 4, 7, and 292) are all in the grand style, rich and sensual in colour, striking in conception, varied in attitude and composition. He is an accomplished artist, who will bring fame to the English school. Mr. Hook's pictures are all homely subjects, transcripts, true to the life, of land and sea, of men and women; yet we have now seen so many of the same subjects, in the same tone, that, charming as is every one of the pictures he has this year exhibited, it would be a relief if Mr. Hook would paint something different. We may here say a word for Mr. Melby's "Drifting on the Rocks" (327), which has the best-painted sea in the exhibition. Mr. Calderon exhibits three pictures. No. 24 is entitled "Her most high, noble, and puissant Grace." A child is being attended by a retinue of men and women, very finely painted showing a great variety of character, and well composed; yet the *ensemble* wants interest, and if satire is intended it is very far-fetched. Mr. Nicol furnishes some admirable representations of character, and his truthful and elaborate representation of accessories is marvellous. Notice especially No. 335, "Paying the Rent." What character there is in all the figures, and what exquisite touches of humour!

Landscape-painting is a speciality of the English nation, and, whether as a pendant to the love of nature itself, or as inducing that love, is equally worthy of admiration and esteem. The figure-painter may study his model at his leisure; but the true, imaginative, and poetical landscape-painter must carry away his impressions of sky and water on his brain, for they are changing, fleeting, and transitory. He requires exact powers of observation with a strong memory, and then, if his imaginative faculties are large, and if he knows how to discard the trivial and unnecessary, painting only what is adaptable to art, he will produce those poetical poems with which the greatest painters have delighted the world. In Mr. Raven's (No. 95) "The Dew rising by Moonlight," mistiness, light, and reflection are very strikingly represented. It is worth looking at again and again, and will well repay careful study.

In Mr. Dawson we have another instance of a brilliant landscape-painter hardly dealt with by the "hangers." His "Scene on the Ribble, Harvest Time" (316), hung next the ceiling, is evidently a noble landscape as respects the treatment of sky, water, and corn-field. "A Spate in the Highlands" (373), by Graham, is a powerful rendering of the storm and mist and sun-gleams of Scotland. "Summer's Golden Crown," V. Cole (185), is a view of rich corn with a distant landscape. No. 403, by the same hand, and called "Evening Rest," is a lovely scene. The sky, the water, the church tower, and the house-tops, the foliage, and the shadows, are all rendered with wonderful effect. It is a picture the spectator may linger over with ever-increasing pleasure. No. 421, by Holl, junior, "The Ordeal," tells its story well. A painter and his wife are looking on while an expected purchaser and his wife—a rather fine lady—are examining a picture on the easel. Who can compute the sum of thought, labour, and anxiety, of heart-burning and heart-aching one exhibition would disclose if the story of every picture could be told.

"Ere Care begins" (11), by T. Faed, R.A., is one of the artist's pleasing homely subjects; but Mr. Faed's colour, though rich, has a tendency to fattiness. "On the Way to School" (117), E. Davis, is excellent. The boy is really in motion; the girls and the landscape are admirably painted; and the picture is altogether a perfect gem, by a young artist. "Trial by Judge and Jury" (115), C. Hunt, is full of humour; and No. 191, "Hearts are Trumps," by Archer, is a good work. The archness and beauty of the girls, and the richness of the dresses, are most effective, and perhaps the textures are here painted with more brilliancy than in any other work in the exhibition.

Of pictures "By command," Mr. Thomas's "Queen and Prince Albert at Aldershot" (212) is by far the best, and the only one of its class we can afford space to notice. Mr. P. F. Poole, the Academician, is one of the most poetical of English painters; his works are always full of imaginative power and rich with the glory of colour. We cannot, however, think that in his "Before the Cave of Bclarius," from *Cymbeline* (82), he has worthily represented Imogen. There are cases in which a poet has created a character which only a pictorial genius as great as the poet's could worthily transfer to canvas; and Imogen is one of them. This artist's "Midsummer Night," figuring a shepherd boy asleep by the sea, we can only term a perfect idyll.

If the terrestrial beauties in this exhibition come short of angelic quality, the professed angels are no better off. This applies to Mr. Thorburn's "Orphan" (279), but though the angel be a failure, the orphan's head is admirably conceived and painted. We would now gladly give our impressions on the portraits, but, as want of space does not permit us to do so, they must be reserved for a future notice.

NATURE AND ART

ENGLISH FARMING IN THE SIXTEENTH CENTURY.

THE LITERATURE of Agriculture in England is of small extent and antiquity. Farmers have never been great readers, and, consistently enough, have been very meagre writers. Indeed, till almost our own days, education was deemed rather prejudicial to the interests of agriculture, and it was long thought that the same hand could never wield successfully the spade and the pen. Our age has exposed this fallacy, and has also witnessed the removal of those special obstacles which, in earlier times, impeded alike the advance of rural economy and the growth of its literature.

At and after the Norman conquest, the land generally was held under the Crown by feudal lords, whose attention was almost wholly given to those antagonists of agriculture, war and the chase. The former devastated the country, and consumed its scanty population; so that in troublesome times, the intervals between which were very short, the vassals contributed to the fertility of the fields almost as much after their deaths as they had done in their lives.

The chase, again, was but little less detrimental to the interests of the farmer than were the battle and the raid; for, in order to enjoy it the better, the forest remained untouched, or was even enlarged, the heath was left wild, the fen undrained, and the wild animals only just so much checked as to give keener zest to the national love of sport.

It is not, therefore, very surprising to find the condition of English agriculture, during the middle ages, characterized as "most miserable." And, if it was slow in emerging from such a state, we must remember that, then as now, the more active and energetic minds found their most congenial sphere in commercial enterprise; for we need not be ashamed to confess that England, so long as she has been a great nation, has been a "*nation boutiquière*."

Strange as it may sound to modern ears, the church must be credited for whatever progress English agriculture made before the sixteenth century. It proved, in most cases, a better landlord than the laity; and its system of leasing lands for terms of seven years, with fines on renewal, was far more in advance of contemporary practice than it now is behind it. The regular clergy strove to counteract the evil influences which were at work around them. They reclaimed the wastes and cleared the forests, improved the breeds of sheep and cattle, and worked with greater intelligence than their neighbours, inasmuch as they were guided by Cato and Virgil, Columella and Pliny, and not by the obstructive prejudices and traditions which swayed the uneducated.

But, though they very materially assisted the progress of agriculture, their contributions to its literature were rather indirect than direct. We learn a good deal about their system of farming from scattered entries and passages in the account rolls of various religious houses; but no regular treatise has come down to us from them. In fact, we are indebted, singularly enough, to a member of the judicial bench for the first published work on English agriculture, written when the power of the Church, as an owner and cultivator of land, was beginning to decline.

Sir Anthony Fitzherbert* seems to hold a sort of middle place between Cincinnatus and Mr. D'Israeli, with this difference that his work was composed in "the intervals of business," and not in enforced retirement from it. His agricultural reputation was certainly not acquired at the expense of his legal fame; for his treatise, *De Naturâ Brevium*, is as strongly commended by Blackstone, as his *Boke of Husbandrie*, by Mr. Wren-Hoskyns and similar authorities.

The latter work is indeed full of curious information. It contains the experiences of a farmer of forty years' standing, who, though ignorant of all the advantages of cross-breeding, yet was as practical as the right honourable member for Bucks, and, like him, considered "sheep the most profitablest cattell that any man can have."

* Sir Anthony was the youngest son of Ralph Fitzherbert, of Tissington, county Derby. He was made a judge of the Court of Common Pleas in 1522, and retained his seat till his death in 1538.

Nothing, perhaps, marks more strikingly the growth of our agricultural knowledge than the contrast between the judge's book, and such a work as Mr. Morton's Cyclopædia of Agriculture. The former* condenses all that could then be said on the subject within the compass of some hundred pages of large black-letter type. The latter is a ponderous work in four octavo volumes, with double columns of close, though clear, print.

It must not, however, be supposed that the example of an eminent judge was required to make agriculture popular amongst the higher classes in England. Though the country gentleman, in the modern acceptation of the term, is a creature of very recent growth, yet a connection with the land, and an interest in its cultivation, has been held in honour from early times. Three or four centuries, ago it was not considered at all derogatory to his rank, for the son of a wealthy nobleman to seek a practical acquaintance with the current system of agriculture by a sort of apprenticeship to the business. We read, for instance, that Thomas, 5th Lord Berkeley, was "educated at Thornbury in a farmer's life, being a perfect Cotswold shepherd, living a kind of grazier's life, having his flocks of sheep somering in one place, and wintering in another; and he observed the fields and pastures to be sound, and could bargaine best cheap; and he kept an account of all his receipts, payments, profits, and losses, concerning his flocks: sold his wool for 12s. 8d. the todd; and kept also accounts of all his household expenses." †

It would not be difficult to find a parallel to his lordship in our own times. An ex-colonel of the Guards, as eminent for his musical talents as for his skill in farming, is fond of narrating his own experience as a seller of stock. Disguised in a smock, and shod with his clumsiest shooting-boots, he drove his sheep to a certain market in Hampshire, and took his seat on a hurdle, smoking the strongest "cavendish," and waiting for business. His price was too high for indiscriminate buyers; but, at the close of the day, a rough-looking customer made a bid which, after a due amount of wrangling, was accepted. On adjourning to the public-house to bind the bargain with the customary "drain," and to exchange addresses, each wrote his own name, and the astonishment that followed was mutual; but the seller had the satisfaction of learning that his sheep had pleased the critical eye of General Wemyss, and had been bought by him for the Prince Consort. Truly a strange field and a strange encounter between two gallant officers, who had both exchanged their swords for shepherd's crooks.

In estimating the causes of the slow progress which agriculture had made in England three centuries ago, it would be unfair to leave out of account the almost entire absence of good roads. Easy communication with a good market-town, and facility of transport for produce, are advantages now so common amongst us as to be scarcely recognized as such. But think of the loss of time, money, and capital (not to mention that of temper also), which must have been the result of the state of things before the days of General Wade. Even two centuries ago it took nineteen days for the news of Charles the First's death to reach Taunton. This was in part due to the loyal unwillingness of the West Country folk to receive and transmit such intelligence; yet it is an instructive fact that there was a time which allowed the possibility of such tardy travelling. It was not until the year 1663 that the first act of Parliament was passed authorizing the levy of tolls for the repair of roads.

Neglected nature had also a powerful ally, and the farmers an unreasonable opponent, in the vexatious legislation of James I. That meddlesome monarch enacted that carts and waggons with four wheels so galled the highways and bridges as to be indictable as common nuisances, and the royal proclamation was only the echo of local Acts of long standing. With such difficulties in the way, the farmer had no choice but to seek the nearest market, and confine himself wholly to it. And even there fresh obstacles awaited him. He was surrounded by a complicated and troublesome system of enactments, and was liable to have his just expectations of profit disappointed by the issue of a sudden mandate, fixing the price of corn at what Mr. Mayor might consider the fair value.

Of one other drawback with which farmers had to contend, we think too much has been made. It is not unusual to hear it said that the seasons in England are different from what they used to be; that the winters, especially, are not so rigorous as formerly. This is probably, in some measure, true; and is partly the result of the diminution that has taken place in the extent of forest and undrained land. Even in our own days the climate of Canada has undergone a perceptible change from similar causes. But we, ourselves, are inclined to think that, after all, the variation in temperature has not been very great; and that the truth is, that science has rendered farmers less dependent upon weather than in former times, while free trade in corn and cattle has rendered us less dependent on the farmers. The last two bad seasons, following each other in succession, would have sufficed to ruin a vast number of farmers of the old school; but we have not heard that agriculturalists, as a class, are louder than usual in their complaints. And it is certainly the fact, that the public generally have suffered less from the effects of last summer's drought and last winter's rigour than had been reasonably expected.

The foregoing remarks may serve as a sort of apology for the backward condition of agriculture in England three centuries ago. Let us add that the exceptions to that general backwardness are not found in the quarters where we should have

* We refer to the edition of 1598 "corrected, amended, and reduced into a more pleasing forme of English than before." The original work was published in 1523, and is much shorter and more quaint than the later editions.

† Smyth's Lives of the Berkeley Family, p. 177.

expected them. To see high farming carried on with most success and vigour nowadays, we should go to the eastern and north-eastern counties: in earlier times the south and the west were most advanced. Indeed, no student of English history can have failed to remark the leading position which the western counties held in the sixteenth and, in a less degree, in the seventeenth century. Old Aubrey says, "The Devonshire men were the earliest improvers (in farming). I heard Oliver Cromwell, Protector, at dinner at Hampton Court, 1657 or 8, tell the Lord Arundell of Wardour, and the Lord Fitzwilliam, that he had been in all the counties of England, and that the Devonshire husbandry was the best."* Cromwell, it must be remembered, besides possessing the keen and rapid eye essential to a general, had also the special knowledge of a practical farmer, and his judgment upon such a matter as this is very valuable. Nothing, however, tended so much to check this favourable state of agriculture as the very wars in which Cromwell engaged. The cultivation of the soil was left "to none but a few weak women and children, assisted by such infirm old men as were unfit to be soldiers;" and so rapidly had the farming deteriorated in Devonshire, that, in the reign of Charles II., "in many parts of the county, an acre or two of wheat was esteemed a rarity; barley and rye being then the most common tillage, and such a quantity of oats as would then be sufficient for their hogs and geese, and perhaps sometimes for exportation." (Chapple's Notes to Risdon's Devon, p. 17.)

It ought, however, to be noticed that Tusser, the well-known author of "Five Hundred Points of Good Husbandrie," was a native of Suffolk, and his judicious influence must have been somewhat felt in that and the adjoining counties. Indeed, the cultivation of hops during the reign of Henry VIII. was as successful in the eastern counties as it now is in Kent, Surrey, Sussex, and the western shires. Bullein, in his *Government of Health*, observes, that "tho' there cometh many good hops from beyond sea, yet it is known that the goodly stilles and fruitful grounds of England do bring forth, unto man's use, as good hops as groweth in any place in this world, as by proof I know in many places in the countie of Suffolke, whereas they brew their own beere with the hops that growe upon their owne grounds." Carrots, also, which are still a favourite crop in the Sandlings of Suffolk, were in high repute three centuries ago; and the East of England generally especially Cambridgeshire, was celebrated for its saffron. This plant which was once cultivated to a very great extent, both as an article of cookery and of medicine, has now fallen into disfavour.

The North of England, abounding in forest, moor, and fen, needed, as it developed, all the energy and skill of its inhabitants to bring it to the front rank. But even 300 years ago, it had acquired that reputation for its breed of horses which it still enjoys; and Fitzherbert (who tells us that his stock of mares was more than forty!) speaks of going to Ripon to buy colts.

Three centuries ago, England presented some points of curious resemblance to the new countries of our own day. The dissolution of monasteries, the policy of Henry VII. and Henry VIII., and the impulse given to trade, had reduced estates in size, and encouraged a more profitable cultivation of them. Woods were felled, and inclosures made upon a large scale, though, even as late as the end of the seventeenth century, a considerable tract of country, including much of Wiltshire and Gloucestershire, is described as "Campania." This virgin nature of the soil may, perhaps, account for the high average of produce which tillage lands then yielded. Holinshed places it at from 16 to 20 bushels of wheat, 36 bushels of barley, and 4 or 5 quarters of oats per acre: results which Mr. Mechi, with all his appliances, would have some difficulty in beating. Notwithstanding these productive powers, land was decidedly cheap. Twenty years' purchase was regarded as an exceptionally high price, and Sir Symonds D'Ewes tells us that, in 1597, it had fallen as low as sixteen or seventeen years' purchase. We can, therefore, readily understand what Markham quotes as the general estimate of farming in his days, viz.: "the onely or principall and greatest gaine that is, because no other thing bringeth more gaine unto the master thereof than the earth, if it be well husbanded and reasonably maintained." And the same writer, in recommending a landowner to be his own farmer if he wishes for profit, speaks of "*the greater spoile*" that will otherwise accrue to "the grosse-headed peasants who, notwithstanding that they are altogether ignorant, grow rich at our costs and charges." This charge of ignorance, by the way, comes with rather bad grace from one who, shortly after, begs his readers to observe that, "for writing and reading, it skilleth not whether the bailiff be able to do it or no; and that as to the other R, a good memory is the best account-book, for paper will admit anything."

Certainly the processes of agriculture at this period were neither complex nor manifold, though they did imply some branches of knowledge which are wholly omitted in the teaching of the Royal Agricultural College. For instance, the "Boke of Husbandrie" gives us the following advice:—"*How to make barraine ground bring foorth good corne.* If thou sowest any pease, beanes, barley, and oates, sowe them upon the 8 day of Aprill, which is the Equinoctiall vernall, when Libra draweth the houres of the daye and night to an even and just proportion. . . . . but if thou wilt be assured that no corne shall faile, then take salt-peeter and mingle it in with thy corne, and sow it, and thy labor shall never be frustrate." The first clause of this advice shows that Sir Antony had not forgotten his Virgil; and the second really evinces some notion of the peculiar properties of nitrates, even though it is expressed in such a way as to imply that agri-

* Aubrey's Natural History of Wiltshire, Part II. chap. viii.

cultural chemistry was still regarded in much the same light as alchemy, or the forbidden art. But even though much ignorance prevailed as to the true principles of agriculture, and though reasons adduced for adopting this or that course are often trifling or utterly false, there is yet a good deal of sound sense in many of the treatises of the sixteenth century. Gervase Markham, for example, bids his pupils learn the nature of the soil—

> ——— "quid ferre recuset
> Quid valeat." . . . .

And "not to force it to beare that which is contrarie to it." His directions, also, for the improvement of light lands by dressings of marl and dung are in accordance with modern practice; but he is wholly at a loss how to temper strong clays and heavy soils, except by deepening the furrows so that they may take the place of drains. Fitzherbert, in the same manner, speaks of marl as the best manure that exists—adding that "it is enough to manure your grounds once in seven or twelve years with it." It must, however, be borne in mind that the use of lime was very rare in these days—in fact, Markham and other contemporaneous writers do not even allude to it—and we are therefore driven to conclude that marl was employed as a bulky substitute for it. Aubrey says—"Limeing of ground was not used but about 1595, some time after the coming in of tobacco."

The crops which occupied the farmer's attention differed in kind and degree from those which are now his care. Of course the cereals—wheat, barley, and oats—were then, as now, the chief productions of the farm; but, of these, oats were cultivated to a greater extent, and formed the food both of men and horses in most parts of England. They were also employed, indiscriminately with barley and wheat, in the manufacture of beer. Rye was largely grown, as supplying a cheap bread-stuff, though one neither so wholesome nor agreeable as oatcake. It is difficult to obtain a satisfactory average of the price of corn three centuries ago, for the fluctuations were rapid and excessive. Within a few months the extremes of plenty and of famine were sometimes reached, and we read that in one year the poor were barely kept alive by doles of rye-bread, while in another "they traversed the markets to find out the finer wheats." Clover and artificial grasses were unknown; the former was not introduced into England till the middle of the seventeenth century. Indeed, we may almost call Sir Richard Weston, who introduced sainfoin, the founder of modern English husbandry. He was an ambassador to the King of Bohemia during the Commonwealth, and, on his return from abroad, pointed out to his countrymen the advantage of the field-cultivation of turnips as a winter food for cattle. To him, also, we owe, in all probability, the foundation of the alternate system of husbandry. Potato-culture, now so important a feature in Scotch and English farming, was hardly known three centuries ago. For, though Drake and Raleigh had brought the plant to England and drawn attention to its value, yet for a long time it was used rather as a sweetmeat than as a vegetable. We find it classed with oranges, lemons, and conserves, as a suitable present to a gentleman of rank in the sixteenth century, and, even as late as 1620, Taylor, the Water-Poet, sings of it thus:—

> "Spanish potatoes are accounted dainty,
> And English parsneps are coarse meat, though plenty:
> But if these Berries or those Rootes were scant,
> They would be thought as rare, though little wont,
> That we should eate them and a price allow,
> As much as Strawberryes and Potatoes now."

We have also seen, in an Elizabethan cookery-book, a receipt "to make a tarte," which begins thus:—"Take two quinces, and two or three burre rootes and a potaton, and pare your potaton and scrape your rootes and put them into a quart of wine," &c. It may not be generally known among housewives that excellent jelly can be made from potatoes.

With regard to the other branch of farming, we may say that the improvements have been made within narrower limits. It was laid down by Fitzherbert as an axiom that agriculture and stock-keeping must go together. . . . . "the husbandman liveth by plowing and sowing of his corne or by rearing and breeding of cattell, and not the one without the other, because they be adjuncts and may not be discevered." Oxen were considered more profitable than horses for ploughing and purposes of draught, but as meat was a rare luxury with the bulk of the population, not much attention was paid to the breeding of cattle for the market. It may amuse our readers to know what were considered the marks of a good cow in the sixteenth century:—"Beetle-browed and sterne of looke, her head and neck big, and from her throate hanginge downe to her shanks a large and long dewlappe; let her sides be proportionlesse and great, and every part of her, even her very foote, as bigge as bigge may be. . . . . in general, the more bull-like a cow is, the better." Sheep were a triple source of profit to the farmer, and consequently received his utmost care. In his choice he would probably be guided by Fitzherbert's advice, and select those that were "big-boned and well-woolled." The wool was then, as it now is in Australia, of more importance than the meat, and, in the fifteenth and sixteenth centuries, the cultivation of the soil was absolutely prejudiced by the undue favour shown to the wool-trade. Arable land was in all directions converted into pasture, in order to find food for the immense flocks of sheep, sometimes amounting to twenty thousand, which belonged to single individuals. Legislation rather increased than removed the danger, and the contest on the subject between the clothiers and the landowners forms one of the most curious chapters in the history of British economy. But it was not through the wool-stapler and the butcher alone that sheep were a source of profit to the farmer; for Fitzherbert assures us that, "in some countries, as in Suffolke, Essex, and Kent, with many others, they milke their ewes, *a gaine equall to the rest.*" The Cotswold and Aylesbury were considered the best breeds for all purposes;

J. Wolf. del.

Day & Son, (limited) Lith

but Fuller mentions Herefordshire wool—"Lemster ore," as it was called—as "the finest in all England, equalling, if not exceeding, the Apulian or Tarentine in the South of Italy." It need scarcely be added that at this time the Merino was unknown in England. Aubrey gives an interesting account of the dress of the shepherds of Salisbury Plain. He says—"Their habit, I believe, is that of the Roman or Arcadian shepherds; as they are delineated in Mr. Mich. Drayton's 'Poly-Olbion;' *sc.* a long white cloake with a very deep cape, which comes halfway down their backs, made of the locks of the sheep. There was a sheep-crooke (*vide* Virgil's Eclogues and Theocritus), a sling, a scrip, their tar-box, a pipe or flute, and their dog. But since 1671, they are grown so luxurious as to neglect their ancient, warme, and useful fashion, and goe *à la mode*. Before the Civill Warres I remember many of them made straw hatts, which I thinke is now left off, and our shepherdesses of late yeares doe begin to worke point, whereas, before, they did only knitt coarse stockings."

Our space will not permit us to review the condition of the farm-labourer in Tudor times, or even to notice the rude and imperfect implements with which the processes of agriculture were performed. Agriculture has advanced in both respects, but scarcely *pari passu;* and we cannot help thinking there is room for the hope that we may yet see the farm-labourer enjoying at least equal care and consideration with those mechanical aids which modern husbandry delights to honour.

BUCEROS NIPALENSIS.

By Captain Warren, Royal Artillery.

To the Editor,—Sir: The enclosed sketch is of a bird which I believe to be entirely unknown to English naturalists. The specimen from which I took it was shot in February, 1865, in the Pass leading to Bissen Tagh, in Bhootan.

For many days previously we had on several occasions heard what we took to be the barking of dogs, and concluded that reconnoitring parties of Bhootanese were in our vicinity. At a distance, the noise was extraordinarily like that of a dog, only not so continuous, the barks being separate, and not one running into another, as is almost invariably the case when watch-dogs give the alarm.

At length one day an officer of the "Khelab Ghilfre" Regiment approached stealthily the fancied hiding-place of some Bhootanese party, and was surprised to find that the noise proceeded not from a dog, but from a bird, seated on the topmost branch of a tree. He at once shot it with his rifle. On measurement, I found its extreme length from tip of beak to tail-feather 3 feet 11 inches; length of bill, 10 inches. The red feathers on his head and neck very nearly approached the appearance of hair, and this he could make stand out when excited or barking. The huge bill was deeply notched, and bars of blue and black ran perpendicularly near the base; a brilliantly blue, fleshy, bare space extended from behind the eye down the neck, and partly round a wattle of bright orange, which hung immediately below the lower beak; the red extended from the head and neck down the breast and belly to the legs; the beak and tail (including wing feathers and coverts) were all deep black with a blue gloss prevailing; the pinions were the same, excepting the tips, which, like the ends of the tail feathers, were of pure white; the claws finely made and delicate, as is usual in all birds of this class; the eye was black, and the whole appearance of the bird strangely grotesque.

Subsequently, when I knew that the barking proceeded from a bird and not from a dog, I listened carefully to the call, and was still astonished at the resemblance; but I fancied that, having once known of this bird, I should not again be deceived.

I regret not having been able to make more careful notes of this bird's habits, but the river which ran close at hand held out greater inducements to me, for it swarmed with fish, and afforded me most excellent sport. W.

[Captain Warren is not quite correct in thinking the bird above described unknown to English naturalists. It has been both described and figured by Jerdan and Grey. Still, we feel much indebted for the interesting incidents related in connection with its capture. The illustration—carefully prepared from the sketch furnished us—is of the male bird (*Buceros Nipalensis*).—Ed.]

A RAMBLE AMONG THE CRIM TARTARS BEYOND THE SEAT OF WAR.

By W. B. Lord, Royal Artillery.

AND what a bridge it was! A rickety, creaking mass of poles, tree-trunks, and brushwood, lashed together with thongs and ropes. The caution and wonderful instinct exhibited by the mules at the passage of this insecure structure (notwithstanding that the horses had led the way) has since been often recalled to my memory by similar traits displayed by the knowing old trained elephants which served us so faithfully in Central India. The clever long-eared companions of travel I now describe, investigated doubtful crossing-places most carefully, and never trusted to uncertainty. It was most curious to observe the way in which they first gave a couple of hearty sniffs at the bridge. Then they put their two fore-feet upon it, with roached back and protruding snout. Next, another sniff, and one hind-foot on; then a shrill hinny of satisfaction. The other and last leg followed, and over we went, cheerily! We now wend our way through scenery of marvellous beauty. The olive, the fig, and the walnut here grow in vast luxuriance, and reach a colossal size rarely approached in less favoured regions. The "bee-eater" and golden oriole dart from tree to tree, or vanish like harlequins through the holes and crevices of the huge hollow trunks; whilst the "roller jays" flit from shrub to shrub like living gems. Here we are literally getting into "boulder land." Stupendous blocks of riven rock lie scattered pell-mell, one on the other, in fantastic groupings; and, as we near Liméne, we pass an erratic block of huge dimensions, "the rock of Pánea." On this is perched one of the curious and picturesque old castles which the Genoese left behind them, built, like eagles' nests, on the summits of the most inaccessible rocks and crags they could find; and its shattered walls stand forth in sharp outline and bold relief, amongst the wreck of ages strewn around. The whole immediate locality presents every evidence of having, in some bygone age, passed through a period of the most violent volcanic disturbance. Stupendous masses of rock have been here hurled in broken and scattered fragments even into the sea below. Vast jets of porphyry have penetrated through the deposits of schists underlying the Jurassic limestone of which the towering cliffs are composed. In a small valley running up towards the high and broken crags, the disturbed schists are to be seen, fused with the fragments of upthrown porphyry, showing the violence and intensity of the igneous action to which this formation has been subjected. A short distance onward, the schist stratification curves up in one vast arch towards the mountain, rising to about thirteen hundred feet above the sea-level; whilst, beyond, Mount "Ai Petri," or the mount of St. Peter, rears his crown in solemn majesty to a height of nearly four thousand feet.* Yet, with all these stern surroundings, it would be hard to imagine anything more fertile than the fairy spots nestling among the rugged blocks of scattered rock. The velvet turf and countless flowering plants grow as though tended most carefully; whilst, here and there, from some cleft or ledge, hang down matted creepers, charming by their very wild luxuriance. Clear, rippling brooks flow on between the grey rocks, and through the rich green natural meadows dotted about amongst them; and where, in glassy pool, the rivulet finds rest, the silvery fish may be seen, shooting off in shoals to their hiding-places as our shadows fall on the transparent water. Above the path on which we are journeying stretches a broad, flat terrace of the greenest and most velvety sward, overshadowed by three or four perfect forest monarchs, and backed by an impenetrable thicket of thorns and undergrowth, whilst amongst the broad green leaves tinkles a tiny rill, that hastes to join the rivulet below. Here we resolve to pitch our camp for the night, and a spot more enchanting, or better adapted to the purpose, it would be next to impossible to discover, even in this land of flowers. Camping operations are commenced by damming back the rill with turf, through which is thrust a tube, composed of bark stripped for the purpose from a young tree; and then we scoop out a deep basin beneath it by shovelling out the sand and pebbles. An abundant and convenient water-supply being thus secured, a fire is kindled in the hollow of one of the trees, the tent is unpacked and pitched, the animals are picketed, and a home is established in less time than it would take to inspect furnished apartments at home.

The nights on this coast are charming to a degree—still, clear, and starlit; and while I was keeping the first watch, the "wheetle-wheetling" of insects and the champing of the mules and horses were the only sounds that served to break its stillness. Towards morning some marauding Tartars endeavoured to creep in among the pack-mules—no doubt, for the purpose of first "stampeding" and then stealing them; but the appearance of my man, armed with a double-barrelled gun, on the scene of action, sent the woolly-coated prowlers crashing through the underwood below as though a legion of fiends were at their heels, and we saw no more of them. As the morning was breaking, I took my gun and wandered away up a neighbouring ravine,

* By trigonometrical survey, conducted by M. Chatillon, it was found to be 3,798 pieds de roi in height.

T. Baines, del.

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as a pastime while breakfast was in course of preparation. A short distance from camp I discovered a whole colony of "pin-tailed ducks," which had evidently chosen these pleasant streams and water-meadows for a breeding-place, and were completing their arrangements accordingly. Some were diving about in the pools; others, with snake-like neck, forced their way through the water-plants and feathery reeds. The small dusky water-rails, too, sculled restlessly to and fro amongst their larger neighbours, until some ill-disposed, tyrannical old drake, with outstretched neck and open beak, would make a sudden dash amongst the busy throng, sending them plunging and flapping off for shelter amongst the flags and rushes.

Our line of march that morning still lay through "boulder land," amid wild vines hanging in festoons from every branch and tree-trunk, and trailing their length like cables. A short ride brought us to the village of Simēis. Many of the Tartar huts are built against the hillside by simply digging a deep notch, so to speak, in the bank, fixing a flat roof composed of poles, brushwood, and turf, like a platform, level with the ground above, and building up the front with a sort of "wattle and dab" wall. The roofs project far beyond the walls, so as to form a sort of verandah, and those at Simēis were in most instances covered with a luxuriant crop of grass, on which the goats were contentedly feeding, yet, as it seemed to me, in peril of tumbling head-over-heels down the chimneys, which were mere open holes. A benighted traveller, stumbling about in such a spot, would stand an excellent chance of dropping down into some family circle in a manner more uncercmonious than agreeable. The greater portion of these huts were literally embowered in fruit-trees, and their gardens overrun with the trailing stems and tendrils of gourds and other members of the pumpkin family. I saw in many of them a curious and ingenious method of providing habitations for the bees, which appeared exceedingly numerous. A number of short pieces of log, thirteen or fourteen inches in circumference, are hollowed out until little more than the bark remains. The ends are then stopped up with clay, leaving a hole for the entrance and exit of the busy swarm; and I presume that these logs are separately removed as their contents are required for use. We saw mills of the most Lilliputian proportions, erected where the numerous rivulets afforded the requisite power, their tiny wheels splashing lazily round, whilst the wooden hammers they were constructed to work thumped away monotonously on the coarse Tartar cloth in the course of manufacture.

Many of the natives of these villages were about as unprepossessing specimens of humanity as one could well meet in a long day's march through the Tartar country, and that is saying a great deal. Their light-reddish hair (a most uncommon colour in Crim Tartary), coupled with their long, grotesque faces and heads, struck me as most remarkable. Pallas says, concerning these satyr-like people, that "the ancient Genoese (their ancestors) were in the habit of compressing the heads of the newly-born infants about the temples, with a view to rendering them unusually flat; a custom which they appear to have adopted from their predecessors, the Moors." This habit is also common, even at the present time, amongst certain Indian tribes inhabiting British Columbia. It is somewhat curious in an ethnological point of view that the practice should have prevailed among races so distant and distinct, and from such an early period of history; and, although the Tartars appear to have long discontinued it, they still inherit the grotesque expression and contour of face and head enjoyed by their forefathers. Still onward we pass through the land of boulders, every here and there catching glimpses of the sea, and from time to time turning off the path in pursuit of birds, or with hammer and chisel attacking fallen fragments of rock, or with tomahawk splitting off sheets of dry bark and flakes of decayed wood that seemed likely to conceal some secretive, burrowing beetle or its plump larvæ. We are now rapidly approaching the "Palace of Aloupka" and its exquisitely beautiful pleasure-grounds, for a description of which, and of the torch-light fishing we witnessed on the sand-spits near "Yalta," we must refer our readers to our next.

THE HONEY HUNTERS, OF THE SAPATÁNÉ OR WANKIE'S TRIBE,

NEAR LOGIER HILL, ZAMBEZIE RIVER.

Latitude 18° 45′ 8″ *S., and* 60 *or* 80 *miles below the Victoria Falls.*

By T. Baines, F.R.G.S.

WHEN we contemplate the honey-making insect of the southern hemisphere, all ideas of neatly constructed "bee skeps," tastefully arranged in pleasant gardens, which have become almost a necessity to the domesticated insect of our own country, must be at once dismissed from our mind; and still less may we dwell upon the luxury of miniature crystal palaces, in which her majesty the insect queen, receiving the constant homage of her devoted subjects, is exhibited to the gaze of admiring visitors. The little busy bee of South Africa and Australia, though equally industrious, is less civilized than his European congener. The hollow of a decayed tree; the crevice of a rock; or sometimes even the cavity of a deserted ant-hill, broken and sacked by the Aardvark, or Cape ant-

eater, serves him for a nest; and in this the cells are as neatly built, and the honey as carefully stored, by the diminutive labourer of the wilderness, as by the more bulky insect that gathers tribute from the flowers of our own gardens.

In intertropical or equatorial Africa the bee is so far known and valued among the natives that they provide a rude hive or nest, made of a cylinder of bark, five feet long, and a foot and a half in diameter. This they strip from the tree, as the Australian does when he wants it for the rude covering of his Gunyah, or the Canadian Indian when he requires it for that inimitable triumph of native art—his bark canoe.

The bark is divided by two cuts round the tree, at the proper distance from each other; another is then made longitudinally, and the bark, being beaten to loosen it as the work proceeds, is gradually detached by the agency of pointed sticks or wedges. It then resumes its cylindrical form. The central cut is closed with pegs, or sewn together; grass is twisted into a coarse rope, and laid in flat coils, large enough to close the ends, and in the centre of one of them a hole is left for a gang-way. In the dense forests, on his way to Loando, Dr. Livingstone saw many such hives placed horizontally amongst the highest branches; while a piece of medicine (generally a mere strip of bark, such as is common on mangoes or other fruit trees belonging to the half castes or natives, in the Portuguese possessions), was tied round the tree stem below. The natives well understand that most of these are only sham "medicines;" but they believe that some possess the power of inflicting disease or death, and think it safest not to risk the experiment on any. However, some bold fellow will plunder a garden-hive or garden; and it then becomes necessary for the owner to protect his property by charms, which he believes efficient. All the wax exported from Loando and Benguela, is collected in this manner; and Dr. Livingstone found the bee-swarms so universally appropriated by the natives, that he never attended, while in those countries, to the call of the honey-guide, being sure that it would only lead him to a bespoken hive. My late lamented friend Mr. Richard Thornton, the young geologist of the Zambesi expedition, and the companion of the late Baron Von der Decken to the Kilima Ndjaro, or Snowy Mountain of Eastern Africa, saw also, among the natives there, hives made of hollow logs, four or five feet long, sixteen inches diameter at each end, and rather more in the centre, suspended in like manner in the forests. Even this partial attempt at domestication I have never seen south of the Zambesi. The Hottentots, or Bushmen, claim such nests as they discover, or even such as may be within the range of country they frequent; but as Burchell, who travelled in 1810 and the succeeding years, observed, "None of the natives have the least idea of bringing bees under domestic management. They take the honey wherever it is found, and this being done oftentimes at improper seasons, they uselessly destroy the larvæ, or young bees still in the comb." He remarked once that his mattress, having been laid out during the day, had been taken possession of by a swarm, and he very good-naturedly left it to shelter them for the night, after which they departed in quest of some convenient cleft in the rock for their hive. The same or other species of the genus *apis*, he says, abounds in every part of the continent, and in its mode of swarming differs in nothing from the English honey-bee. He mentions, too, that in digging out a nest in a hollow made by some burrowing animal, his Hottentots kindled a fire, and supplied it with damp fuel, so as to drive off the bees by the dense smoke—a precaution generally neglected by those so engaged. The comb and honey are eaten together, and the bee-bread and larvæ, or young bees, are accounted a delicacy; and, indeed, I have myself found when eating wild honey, that some qualification of this kind was necessary to correct its luscious sweetness.

Much of the honey taken by the Hottentots is used to make a kind of mead; and I have been told by experienced colonists that those who have preserved the old traditions of their race, are acquainted with roots and herbs, which, added while the "honey-beer" is in a state of fermentation, impart to it not only an intoxicating, but a stupefying property, which reduces the habitual drinker to an idiotic condition, most helpless and pitiable.

Many are the enemies of our industrious little African. Abroad he meets with "bee-eaters" of every variety, from the common black one to the gaily plumaged swallows, which nestle in perforations of the clay banks of the Zambesi or other rivers, or flit overhead like thousands of many coloured gems glancing brilliantly in the sunlight.

While at home he is exposed to attacks from the powerful allies led to his stronghold by the honey-guide (*Cuculus indicator*), the habits of which have been well described in one of the minor pieces of our poet of South Africa, Thomas Pringle, who has very accurately introduced in the alternate lines the call of the "guide," and the sounds peculiar to the other birds or insects described:—

"The honey-bird sat on the yellow wood tree—
Cher a cher cher a cher cher a cucula—
Watching the work of the blythe honey bee—
Bim a Bom Bim a Bom Bim a Bom boola."

But the watcher of the poet felt his own inability to force the stronghold;

"So he flew to the woodpecker: cousin, said he,—
Cher a cher cher a cher cher a cucula—
Come help me to harry the sly honey bee—
Tic a tac tic a tac tic a tac toola."

It is many years since I read the lines, and I quote them from memory; but there is a moral to them. The woodpecker doubts the justice of robbing the bees, because they have wings, and therefore are in some sort fellow-creatures; but "Cuculus" points out many differences, and cunningly concludes with the tempting argument—

"The hive is half full of juicy young bees."

on which all scruples of conscience vanish, and the woodpecker becomes a willing partner in the scheme.

The "honey-guide" knows, too, that man, whether civilized or native, is as capable of breaking open the hive as the woodpecker; and the hunter, knowing from a distance the call of the bird, responds to it till it approaches near enough to assist him. The man who would shoot it would be reprobated and held in universal abhorrence. It is said that the "guide" will sometimes lead its follower to a serpent, lion, or other dangerous beast; but these may naturally enough be in the path. Livingstone says that he was only once led to a black rhinoceros, and out of his 114 Makololo only one remembered having been so misled.

The bird was first described by Spurrman in 1772 and the variety he mentions (*Indicator Spurrmannii*, Sw.) is smaller than a thrush, grey brown above, whitish beneath, and found principally in the forests on the eastern coast, or towards Kaffraria. It feeds chiefly on bees and their honey, but Le Vaillant found nothing but wax and honey in its stomach, and the skin was thick and tough, so as effectually to defend it from the insect's sting.

The most remarkable nest I ever saw was in one of the densely-wooded kloofs near Sidbury, on the road between Port Elizabeth and Graham's Town. The strata of the rock had been but slightly separated, and, owing to their formation, the narrow cleft thus formed curved so much that it was impossible to reach more than a few feet from its front. The bees, therefore, built securely in its recesses, and only suffered occasional depredations when they had incautiously built so far forward that their combs could be reached and detached.

It is well known that where the bees frequent the flowers of the Euphorbium, the honey acquires an acrid taste; but, though many species grew among the rocks in this locality, I did not hear that the honey was affected,—probably because innocuous flowers were there in abundance for the bees to choose from.

In Australia the natives, catching a bee, and impeding its flight with a minute fragment of grass, will follow it for miles; or, if they see two or more homeward bound, will calculate with mathematical accuracy the point where they ought to converge. Notches are then cut with the stone tomahawk, just sufficient for the insertion of the toes or fingers, the stem of the tall gum-tree rapidly ascended, the hollow sought out, and the nest plundered. I remember that during the Kaffir war, while riding with the mail escort to Fort Beaufort, we passed beneath the Krantz that overhangs the road near the junction of the Fish and Koonop rivers. One of the Hottentot soldiers looked up, and, detecting the flight of these little insects toward a crevice high up in the cleft, remarked to his comrade, "Some day when we are *riding express*, and no officer is with us, we'll stop and take that nest."

The incident selected for illustration occurred some little distance from my house on Logier Hill, where I was endeavouring to rebuild the missing portions of my boat for our passage down the Zambesi. Chapman was encamped at a distance, hunting for me and for the party at his waggons, eighty miles away; but his messengers consumed the meat they should have brought, and as the wild animals were relieved, by the rain-pools filling in the desert, from the necessity of coming to drink at the river, it was proportionably more difficult for me to shoot them, and necessary for me to leave my work more frequently for the purpose of doing so. Besides this, fever became rife among the party, and although my camp, being situate upon a small hill, was more healthy than that of my friend, one of my best workmen had died, and only one little brat—impudent as a street Arab of London, and all the more valuable because no conceivable hardship could knock him up—was capable of attending me. I had been out several times with more or less success, and was myself growing weak from incessant exertion and scanty rations of raw hide and water, when, on Thursday, the 8th of January, 1863, I again crossed the river to Wankie's village; but, for want of solid food, I dared not drink the native beer he gave me. I started towards the north-east with a very intelligent old fellow named Masaawe, and had gained the level of the table-land without meeting a sign of game, when I saw him examine a tree with great attention. A few of the small bees of the country were hovering above us, and some of them directed their course to a small crevice in one of the larger limbs. He deposited his spears, and, climbing up, minutely examined the aperture; then, chopping off a piece of bark, and bruising up its ends so as to form a dish in which his boy might receive the spoil, he commenced enlarging the hole. The wood was softer than I had expected from the smallness of the leaf and the character of the bark, and was, moreover, rotten inside, so that he quickly began to reap the reward of his labour. He sent me a piece of comb, but the honey was soured and as sharp as vinegar, and when he reached the really good honey and the pollen, I found myself unable to eat anything so luscious.

We returned without game, and Pompey so cleverly tricked me out of the last scrap of meat by telling me that the chief was cooking flesh for me, that I hardly knew whether to laugh or be angry at his plausible story. That story, however, I soon found to be a fiction. Wankie, instead of offering me any, showed me some blue baftas which the Mambari had given him, and I found his most delicate way of asking for a present was to make an attendant say to me, "The Chief wishes to thank you," and when I asked "What for?" he intimated the things he desired me to give him. He would not let me have a fowl for love or beads in any quantity, but gave me a bowl of maasa, or stiff pap of the flour of native millet, and next day, after another unsuccessful hunt, Masaawe, who had collected several edible flowers, berries, and roots, gave me some cucumbers and small melons, which, cured of their bitterness by boiling, were not unpleasant.

ATHLETICS.

THE word "athletics," in a substantive form, is a coinage of the last few years, adapted to signify pursuits for which the terms already in use, such as "sports" and "games" were felt to be either inappropriate or inadequate. It must be owned that, philosophically speaking, there is not much to be said for the word. It is merely a rough and ready adaptation of a well-known adjective, and though it certainly supplies a want long felt, and, indeed, falls under the Horatian term, in so far that

"Græco fonte cadit parcè detorta,"

it has nothing further to recommend it, in point either of elegance or ingenuity. According to its Greek derivation, it means properly, all bodily contests of skill, strength, and endurance, with or without the collateral idea of a prize of some kind attached to victory. The nature of such prize, of course, varies with the generations. The victors of old were contented with the honour symbolized in a wreath of laurel, the *palma nobilis*; but ours is a more substantial age, and, instead of the "ennobling palm," the modern champion expects something of solidity and value as a recompense for his exertions.

In the days when Greek met Greek, there were five principal contests, forming a gymnastic course, to win which was the crowning glory of the athlete. This "Pentathlon," to give it its proper name, comprised leaping, running, throwing the quoit, wrestling, and boxing; and though, of course, there were other contests, such as chariot and horse-racing, it is these chiefly from which the word is derived, and from which we recognise its application to modern times.

It may be doubted whether, from among modern pastimes, some might not be selected more worthy of first-class rank than these; but waiving that question for the present, it will probably be admitted that, in substituting "cricket and rowing" for the "wrestling and boxing," which by common consent are excluded from the modern curriculum, we shall be exalting, instead of detracting from the dignity of our gymnastic course. As regards the order and precedence of the different contests, it is obvious that any arrangement must be purely arbitrary. Probably no two men would agree as to the five contests, which are worthy of first-class rank in "athletics." North of Tweed they are very fond of "tossing the caber," "putting the weight," and "flinging the hammer." An Irishman, on the other hand, might consider any programme incomplete which did not include the exciting game of shillelagh. But setting aside national idiosyncrasies, it may be suggested as a general rule, that athletic contests should take rank in proportion as they require, and are calculated to develope the higher qualities both of mind and body. In this point of view, cricket, undoubtedly, ought to rank first of all; because, besides the scientific skill required in all departments of the same, it offers so many opportunities for the exercise of such important moral qualities, as judgment, patience, foresight, and combination,

An inquiry into the origin of the present feeling in favour of athletic exercise would take us back to the era of the volunteer movement in 1859. This movement, which sprang from a general conviction that it was time for the nation to take in hand the measures necessary for its own defence, gave a wonderful impulse to the pursuit of bodily exercise throughout the country. Partly from natural inclination, partly from a conviction of its advantage and utility, and partly, perhaps, from the example of foreign nations, the taste for gymnastics has grown and become almost universal since that period. But the various pursuits, to which the term in its most comprehensive sense applies, have been systematized and reduced to rule to such an extent, that what was before merely practised as a pastime, is rapidly becoming elevated to the dignity of a science. Treatises are compiled, rules are laid down, periodicals are conducted, with the view of instructing competitors on the most approved principles. Enthusiastic crowds now attend the great cricket matches at Lord's and elsewhere; while the rowing contests at Putney and Henley, the athletic gatherings at different centres, and the prominence given by the mass to the subject, all indicate how much the national taste for such things has been developed of late years. The fact, itself, is undoubted; and though some may regret this glorification of the gymnastic element as interfering with more important business, it is a question whether, in these days of wealth and luxury, any more effectual antidote and corrective of the *Virtuti inimica voluptas* could be found, than the real healthy hard work indispensable to individual success, and the manliness of tone which is born of fair, free, and genuine competition.

ANCIENT RECORDS OF FRANCE.

WHAT Lord Romilly and other liberal-minded men have done, and are still doing, for the past history of our own country, the Imperial government is doing for France, namely, placing the contents of the national archives at the disposal of the intellects of the nation; and a more valuable or more interesting work it is not easy to imagine. The circumstances of the cases and the habits of the two countries cause the work to be effected in different ways. The English authorities simply open the mine and clear away the obstructions; and the pioneers of literature, like British colonists in new lands, soon pick out the diamonds and sift the gold from the mass. The Imperial government proceeds in a different manner—examines the deposits, analyses, indexes, and supplies the public with a key to the whole. The treasures dealt with exist, too, under different conditions in the two countries. The archæological wealth of England lies chiefly, though certainly not solely, in the various record-offices of the metropolis; the archives dealt with by the French authorities are principally contained in the muniment-rooms of the provinces.

More than three years ago, M. de Persigny, then Minister of the Interior, presented to the Emperor a report accompanied by the first two volumes of a "Summary of the Departmental Archives anterior to 1790." Since that time the work has been pushed forward with considerable activity. All the departments of France, except five, have commenced the publication of the analyses of their historic documents; thirty-five volumes are completed and placed at the disposition of the public, and a mass of equal amount is in the hands of the *Conseils Généraux* of the departments, in the preparatory form of *fascicules* or loose sheets. The number of documents analysed to the present time amounts to more than four and a half millions. Sixteen towns have followed the example of the departments, and seven of the former have completed their work; Lyons has published the first volume of its analysis.

Amongst the matters thus brought to light are—masses of important political correspondence with the sovereigns of France, Spain, and Savoy, with the chefs of the League and the agents of the Pope; much interesting information

respecting the origin, the works, and the success of painters and sculptors employed in connection with public fêtes and solemnities, amongst whom are conspicuous, Pierre Evrard (1455), Péréal (1511), Sebastien of Bologna, the famous architect Philibert de Lorme, and a great number of celebrated engravers, die-sinkers, bookbinders, and other artists and art-workmen.

The Administration of Public Assistance, the charity board of Paris, has just completed the first volume of the analysis of the documents relating to the famous hospital of the *Hôtel Dieu*, just now about to be superseded by a new building after centuries of service in the cause of suffering humanity. This volume contains a vast amount of topographical information respecting old Paris, of which so little remains at the present moment, and which in a few years will be almost as difficult to trace as the remains of the works of Augustus and Julian which lie beneath them.

Many documents supposed to have been destroyed have been brought to light; and it is stated, in the Minister's report, that a large number of questions relative to state, communal, and individual rights, which have been under dispute for years, can now be settled: these papers have been found principally amongst the cartularies, the *cadastres* or valuation of lands, court rolls, road maps, and concessions of common and waste lands. Much curious and valuable information has been obtained respecting the works and plans for the defences of the ports and coasts of Rouen, Havre, Dieppe, Saint-Valéry-en-Caux; for the prevention of the inundations in Loraine, the embankment of the Rhine, and the formation of canals; projects connected with mines, quarries, *haras*, or horse-breeding establishments, nursery grounds, bridges, and roads; the extinction of pauperism, and many other subjects connected with social economy. The old acts relative to the foundation of hospitals, the creation of the national manufactures of porcelain, tapestry, and tobacco, and the organization of public works, are full of interest at the present moment, when such marvellous transformations are being made, especially in the capitals of France and England.

The most valuable documents of all are perhaps those which help to explain the extraordinary state of society which existed previous to the Revolution, such as the records of the old parliaments, of the States-General, of the assemblies of nobles, of provincial assemblies, and other institutions of that interesting time; and those which illustrate the peculiar habits and customs of the various provinces, their connections, quarrels, conflicts, and disputes. It is difficult to imagine any quarry more attractive than this to the student of European history and of civilization.

All old documents of the kind furnish much personal matter of interest; memorials of men famous in history, in art, or in story, traces of their hand in the movements of the time, and indications of their individual peculiarities; and the French archives abound in such memorabilia. We see Claude Saumise, the *savant* of the seventeenth century, occupied with the deciphering of ancient manuscripts, and at the same time vigorously defending his own claim to nobility; and the echevins, or aldermen, of Lyons, after the troubles of the League, are exhibited expending far more time in searching for the letters-patent which ennobled them than in defending the city against the gipsies, necromancers, and vagabonds of all descriptions who threatened to consume the funds intended for the support of the old and infirm. The records of the local tribunals afford strange glimpses of ancient jurisprudence. In Burgundy, for instance, the fine inflicted for aiding in the escape of the ambassadors of the Count of Savoy and the Marquis of Montferrat, in the year 1385, was only ten francs; but the proceedings gave rise to writings "*fifty feet long*," and these were taxed at a little more than a farthing per foot. In Rouen, in the thirteenth century, slander committed by a woman was punished by three immersions in the Seine; and the murder of a woman of bad repute was expiated by a fine of five francs. In the Orleanais, false witnesses were punished by having their tongues pierced with a hot iron, and being afterwards flogged with rods, by the hangman, through the streets of the town. The early phases of university life are curiously illustrated by documents relating to the famous schools of Avignon, Caen, Poitiers, Toulouse, and other places. Many documents full of interest illustrate the progress of the fine arts and their applications to industry, such as sculpture in stone and wood, painting on glass and enamel, tapestry, and other work. Amongst those appertaining to architecture are the deeds and papers relating to the famous church of Bron, regarded as one of the *chefs d'œuvres* of the sixteenth century, the *Sainte-Chapelle* of Dijon, the Palace of the Dauphins; the Chateau Gaillard, famous in the history of the English possession of Normandy, with its paintings by the Italian masters; and the royal palaces of Fontainebleau, Vincennes, Blois, Ambroso, and other places. The history of the revocation of the Edict of Nantes, and that of the abominable institution of *Lettres de Cachet*, may now be studied in a large number of important documents.

Interesting references to celebrated persons are of course sprinkled throughout the whole of the archives. We find that the great naturalist, Cuvier, in his youth, filled the modest office of registrar in the small commune of Bec-en-Cauchois; and the minutes of the meetings of the authorities, in his handwriting, are still in existence. Pierre Corneille—the Grand Corneille—kept the register of the building of a church at Rouen, of which he was *marguillier*, or churchwarden, and his observations on the conduct of his colleagues are noted with great freedom. A little place called Avon—not in Warwickshire, but in the department of the Seine and Marne—seems to have been a perfect hotbed of genius, though now it is scarcely known. In its parish books are the records of the birth and many other circumstances relating to a crowd of eminent men—the artists, Leonard de Flamand, François de Bologna, Sebastian Serlio, Rosso, Antoine Jacquet de Grenoble; the Primatrice 'Nicolo Dell' Abbate, Jean de Hoëy, Fréminet, Ambroise Dubois; the mathematician Bezout, and the naturalist Daubenton.

The whole expenses of analyzing and publishing these valuable records of a by-gone time, have been borne by the *Conseils Généraux* of the various departments; but the work could scarcely have been done at all, and certainly not within any reasonable period, but for the existence in France of an institution, which has no counterpart in our own country, namely, the *Ecole Impériale des Chartes*, connected with the bureau of the Imperial Archives in Paris. This school, which confers the degree of *Archiviste Paléographe*, supplies keepers and assistant-keepers for the central bureau, and for all the departmental archives; and almost all the historical documents of France are placed under the guardianship of educated men, with whom antiquarian history is the study of their lives.

This great synoptical work is to be completed by an alphabetical index, of which the plan is now under consideration, and by means of which all the existing documents on any subject, whether administrative or historical, may be readily discovered. This portion of the undertaking will be performed under the direction of the Imperial Government. Such an admirable scheme of indexing has never before been applied to the archives of any state in the world. Few governments have ever possessed the means of carrying out such a grand national work; and, still fewer, it must in justice be added, would have thought of undertaking it. What the government of the first Napoleon did for the laws of his country, that of the third is now achieving for the memorials of the past.

THE NATIONAL PORTRAIT EXHIBITION.

TO illustrate our history by exhibiting the portraits of those whose actions have assisted in making it, was a very happy thought of Earl Derby, and has been, on the whole, very well carried out at Kensington. Coming from so high a quarter, and from a man who is himself historical, and a part of his age, it has been liberally responded to. Such a design, however, has its drawbacks; and interesting and copious as is the collection, it still can only be esteemed a crude carrying-out of the idea. Contributions of all kinds, from all sources, have been poured in; and the consequence is, there are not a few pictures which are more than doubtful as works of art; and, again, there are many portraits that are genuine as regards the artists, but are misnomers as regards the persons they are said to represent. The well-informed officials, Messrs. Scharf, Redgrave, and others, are not, however, to be accountable for the errors of this kind. The committee of lords and gentlemen who superintended the getting-up of the Exhibition were placed in a peculiar position. The collection was to be formed of voluntary offerings, and it would, therefore, have been ungracious to criticise too severely the pictures sent in. Indeed, the noble proprietors would scarcely have allowed their property to be depreciated by doubts as to its genuineness. In this dilemma there was no course for the managers of the Exhibition but to catalogue all they accepted according to the description of the owners. The editors of the catalogue have done their work very well under the circumstances. Whilst they have not compromised themselves, nor imposed on the public by sanctioning the false naming of pictures, either as regards artists or personages, they have given a succinct account of each portrait, and enough of the biography to remind or inform those who may not have a minute knowledge or remembrance of history.

To have a collection of upwards of a thousand pictures, many of them the production of the finest masters, well displayed in the South Kensington corridors, and to be able at full leisure to examine the collection at a very trifling outlay, is really a great boon to the public, and it would be hyper-criticism to dwell upon the blemishes of such an exhibition. The arrangement is chronological, and is divided according to the different reigns or dynasties. Commencing with the Plantagenet series, it contains portraits which cannot be contemporary, and are therefore very doubtful. We should be very glad to see a true portrait of so world-renowned a beauty as Miss Clifford, who had the addition of "Rosa mundi" attached to her name on account of her surpassing loveliness; but the Lady in the Ruff presented in No. 1 of this collection can by no means satisfy our desire. We must say the same of the great warrior, Sir William Wallace. The present portrait in no way fulfils our notions of the Scottish hero. Indeed, we must pass over all the pictures until we come to the large, life-sized portrait of the weak but handsome Richard II., which is an emblazoned representation in the old style, and, if not the original, is probably a careful reproduction of the old panel picture. This may fairly be taken as the earliest portrait of an English sovereign. The portrait of Henry IV. has generally been received as a likeness, and is very probably a reproduction of an older original. We may give the same credence to the portraits of subsequent kings in this series. Those of the period of Edward IV. have sufficient probability about them to make them interesting. One of the most curious and perhaps popular is that of a lady who is prominent in the history of England, although her conduct was disreputable, and her end miserable. Such, however, is the triumph of domestic and personal influence over historic grandeur that Jane Shore is familiar in every one's knowledge, whilst the Woodvilles and the Nevilles are known only to heralds and antiquaries. So much more potent is the ballad-maker and the dramatist than the historian, that this goldsmith's (or, as the catalogue says, baker's) handsome run-a-way wife is very probably more eagerly looked for by the public of this day than "The White Rose of York," Elizabeth Plantagenet, who, by her marriage with Henry Tudor, united the houses of York and Lancaster, and put an end to the long aristocratic civil wars. Of Henry VII. there is a great choice of portraits; but with this monarch we merge into the Tudor dynasty and get into somewhat safe and assured ground both as to artists and subjects. There is no doubt that the early Flemish artists settled in England about this time, and the portraits of these reigns are certainly by superior hands to those that preceded them. We are now coming to the period when every portrait of eminence was at one time attributed to Holbein. Some careful research, however, has now proved that there were several painters who, either instructed or inspired by him, worked in his style; and, no doubt, some of them were Englishmen.

The period of Henry VIII. is very finely illustrated. Of course, there are profusions of portraits of the burly monarch, who seems, from his veriest childhood, to have the bold and defiant manner which is so peculiarly characteristic of him. The wives and victims of his perverted religion and inordinate passions are also here, and are viewed with a painful interest.

The reigns of Edward VI. and Mary are principally illustrated by statesmen and clergy, the victims of successive factions, both lay and clerical. The reign of Elizabeth, as it was so long and so illustrious, is rich both in the persons it presents, and in the artists. The queen is represented on an infinite variety of canvasses, some of which it is difficult to reconcile as giving the portraiture of the same person; but this effect is more strongly produced in the illustrations of Mary Queen of Scots, who varies remarkably from the common idea entertained of her beauty. The warriors, statesmen, navigators, nobles, beauties, and eccentrics, of this remarkable period are copiously illustrated, and, in the main, in a truthful and powerful manner.

To the reign of James I. have been relegated some personages who, at all events, took their rise in the previous reign. Had they, however, been placed there, this period would have been very bare, whereas now it is rich in the great dramatic poets. The same remark that we have already made as to the extreme difference of portraits said to be of the same person applies here; and those of Shakespeare may be cited as an instance.

The period of the first Charles is rich in Vandykes, and is well illustrated. The second Charles's time, with his profligate favourites and courtiers, both male and female, is fully illustrated; and, as many of the divines and philosophers are also represented, never was there a greater mixture of good and bad; the last, however, we fear prevailing. There is just a sprinkling illustration of the three years' reign of James II., many of the personages who flourished in his brief period being reserved for the succeeding Exhibition, which will so copiously represent that and the ensuing period, down to our own time. We hope this is only a commencement of illustrating our history, and when thoroughly organized there is no doubt the grand periods of our national annals will be taken as the basis of collection. Thus we might see exhibited in groups all the important personages who moved in the Reformation, the grand Rebellion, the Revolution of 1688, &c. This Exhibition, however, is a very good beginning, and the nation is under obligation to those who suggested and to those who carried it out.

THE FRENCH AND FLEMISH EXHIBITION.

AN exhibition of pictures of the French and Flemish schools is now, for the thirteenth time, open, under the direction of Mr. E. Gambart, at his Gallery, No. 120, Pall Mall, and is not one of the least pleasant resorts in town. The connections of Mr. Gambart with the Art world of the Continent are so wide and have been so long established, and his taste is so unquestioned, that the almost universal merit of the collection is no matter of surprise. Comprising but 218 works, by about half that number of artists, it neither fatigues nor dazzles the visitor, who may, nevertheless, in a couple of hours, derive a variety of very delightful impressions.

There are minor examples of Rosa Bonheur and Gallait—the latter not altogether satisfactory. Baron Leys is represented by three extraordinary revivals of mediæval Dutch life and characters, and is to our thinking surpassed in his own peculiarities by his pupil, V. Lagye, whose "Sunday Afternoon" is, in parts, simply wondrous. By Madame E. Jerichau, of the Royal Danish Academy, six small and highly-finished paintings of domestic subjects are deservedly popular. "The Lesson," "The Morning Toilet," and "Tired out," all by Max Michael, works of the same character, must by this time have found new owners. It was a satisfaction to find that an old and daring friend, Biard, who is well remembered as the painter of "The Pirate's Deck," some years ago, has not fallen a victim to his passion for Northern adventure. His "Souvenir of Central America" and "Lapland Lovers off Cape North" show us that a hand we feared was cold has not lost its cunning. The great Meissonier—whose minutely-finished *morceaux* are striven for by all who can buy, and sighed for by many who cannot—has two exquisite subjects of military character, to praise which would be impertinent; and he too, it would seem, has pupils, Ruiperez and Zamacois, who will not be unambitious of the mantle, should it, regrettably, be at liberty. An extremely fine work is "The Bashi-Bazouks" of Adolphe Schreyer. The magnificent steed who leaps the stream is as effective in colour as in drawing. We cannot open ourselves to the reproach of blindness by not naming the two other Bonheurs, Auguste and Juliette. The "Meadow Scene" of the former and "The Twins" of the latter are both admirable in their way. Among the most notable dexterities here are "The Nun" of Madame Heuriette Browne (whose face is seen through a crape veil), and the satin gown—the one attraction—in Joseph Cormans' "Lucy Ashton;" and Eugéne Verboeckhoven's delighful "Flemish Meadows—Morning" and "ditto—Evening" will arrest all who share our love of nature and truth. We must, however, take *en passant* a playful exception to the suggestion of the catalogue that the range of hills represented in the latter work bounds any Flemish horizon. No scholar, no artist, no admirer of hard study and uncompromising truth, may pass the very remarkable productions of Alma-Tadéma, a pupil of the Baron Leys and a Paris first-class medallist. The first, serially, is "The Portico of a Roman Theatre;" and the artist has shown the descent of a Roman *grande dame* from a cleverly-studied, but of course somewhat apocryphal, car of the period, at the portal of the Roman amphitheatre. A gentleman hands her politely from her one-horse "pilentum," and another lady seems to have her husband waiting for herself and her boy. Here we have *palla*, *toga*, stole, tunic, and all the minutiæ and accessories of Roman costume, even to the *chignon* and frizzled curls of the time, reproduced with a most commendable fidelity and, at the same time, with satisfactory breadth. The supernumerary characters in the foreground, and even a portion of the public, of whom we have a glimpse, seated in the auditorium, are as carefully and intelligently studied as the principal figures. There is a degree of hardness in Tadéma's treatment of drapery which is apt to strike some observers unpleasantly, but as to its admirable lines there can be no controversy.

The gem of the collection we have yet to refer to—the "Phryne" of Jean Léon Gérome, a work with which the artistic public are already familiar through a published photograph. The story runs that an advocate, defending Phryne before the tribunal of the Areopagus on a charge of impiety, enforced his peroration by disclosing to the court a portion of his client's charms, thus appealing to the highly-cultivated sense of Beauty that so strongly influenced the Greek mind. This startling episode the great pupil of the great Delaroche has depicted in a startling manner; in fact, he has permitted his pleader to disclose Phryne in absolute nudity. The drawing and colour, both of the principal figure and of the partly scandalized, partly charmed, and wholly amazed tribunal—the latter, as may be imagined, offering a great variety of expressions—have attracted so much observation, and have been so lauded by the most recognised authorities, that we will not weary our readers with a *réchauffé* of criticisms which have left little of eulogy unsaid.

Before closing our notes we have only to recommend to the visitor the "Arabs in Ambush," No. 180, and D'Aubigny's very large, gloomy, and grand landscape, No. 50,—hinting at the same time, that the effect of this canvass cannot be appreciated at a less distance than from fifteen or twenty feet. Happily, the space at Mr. Gambart's disposal allows every work in his interesting collection to be seen from a suitable point of view.

ON MUMMIES.

By S. Birch, LL.D.

BEFORE describing the ceremony of embalming, and the decorations of the dead, it will not be uninteresting to trace, as far as monumental and literary evidence admits, the sketch of the life of one of the mummies that lay in the tombs of Gourneh. The children of the upper class were first committed to the care of a nurse. After their first infancy, they passed under the direction of a tutor. By him they were taught to read; the works they read were the so-called Hermetic books, supposed to have been written by Thoth himself. These books treated of religion, ethics, grammar, and the narrow circle of the sciences known to an Egyptian. If destined for the priesthood, or to exercise the profession of a scribe, the youth passed into one of the colleges attached to the temples of the principal cities, and there perfected his education. According to the works which have escaped the ravages of time and the destruction of the Arabs, there was "nothing like learning." It elevated its follower to the highest ranks, and proffered to him the noblest rewards. Every other walk or pro-

fession of life had its drawbacks. Not to mention the inconveniences and degradation of the lower occupations, the toil and uncertainty of trade, and the mechanical art, even the occupation of agriculture had its misfortune. An Egyptian scribe draws a lively picture of the miseries of the farm: the horses unfit for the plough, the blunted ploughshare, the rats which over-run the corn-bins, the locusts that devour the crops, the bandits that attack the farmer, and the idle negroes, whom he cannot compel to work, are not forgotten. But the charms of learning are everywhere extolled, and the knowledge of hieroglyphics pointed out as the path to fame and honour. The young scribe learned to write, studied the codes of law and morals, undertook the keeping of accounts, and either became attached to the temples whose organization resembled that of the modern monasteries, or else entered into the civil service of the state, and became one of the bureaucracy. If the profession of arms required his services, the youth was sent to a military school or a barrack. He was there taught all the drill and martial exercises required; the use of the sword, the buckler, and the bow. Under the earlier dynasties, infantry only were known or used, for the horse was unknown till the eighteenth dynasty, and then only used for the chariot. To take the chariot to pieces, to harness and drive the horses, was then a portion of the soldier's duties. When foreign wars and external conquests had carried the standards of Egypt to the banks of the Euphrates on the northern, and within a few degrees of the line on the southern limits of the empire, the Egyptian soldier traversed, as occasion required, these distant regions, and kept garrison amidst the hostile Assyrians, or revolted Negroes. In these expeditions he not unfrequently encountered the wild beast of the plain or waters as well as the face of the enemy. It was pastime to spear the crocodile of the Nile, or harpoon the hippopotamus—the behemoth of the waters: it was not less a sport to kill the lion of the plains of Mesopotamia or the forests of Syria. Nor were the diversions of polite society wanting to his return to Memphis, the capital of the lower, or Thebes, of the upper country. Banquets, gymnastic sports, dancing-girls, music, the games of chance and skill, beguiled his leisure hours; the toilet occupied others; and the *beaux* of Thebes painted their eyelids as darkly as the *belles*. The condition of the upper civil and military classes was aristocratic. Their households were filled with slaves, many of them prisoners of war, who made in their workshops all that the master required. The domestic servants were nearly all slaves. The produce of the land sufficed for the support of the household, and as there was little or no money, even at a highly refined period, barter, or precious metals paid by weight, sufficed for the acquisition of such things as were required. At an early period the Egyptian was only a fresh-water sailor. He navigated undauntedly the placid or ruffled bosom of the Nile; but in a later age his galley ploughed the deep, and the wines of the Syrian coast were brought on shipboard to the cellars of the monarch and the aristocracy. The Egyptian possessed all the enjoyments of life; all the luxuries considered essential in those days to his comfort or happiness. Conquest obtained some; commerce or barter others. The civil government was as rigorously enforced by police magistracy, and by the royal courts of "hearers of plaints," or judges, as the foreign policy was carried out by a disciplined army, quite adequate to hold Assyrians in check and negroes in awe. But the sacerdotal class soared above all others. They ministered to the temples, interpreted the oracles, taught the mysteries of religion and the secret of letters. The vast temples of Egypt were a government within the civil government itself. The palaces at Thebes—if palaces at all—are so mixed up with the temples, that they are lost in the greatness of the religious edifices. The supreme Pontiff or high priest of Amen Ra, the Theban Jupiter, was only second to the monarch. Under him were the orders of reverend prophets, or, as they were called, divine fathers and priests. The administration and organization of these vast temples was equally minute—scribes or clerks attended to the accounts, comptrollers presided over the lands, the corn, the cattle, the linen, the revenues of the society. Each department had its presiding officer; wherever anything was to be kept there was an appointed keeper. Their riches, their rank, and their importance are attested by the numerous tombs at Gourneh, which record facts interesting to all students of ancient history and art, while the tenants of the sepulchres have long since disappeared. Their destruction commenced long before the Arab fellaheen or the European traveller penetrated their obscurity. It is as old as the sepulchres themselves. The priestly order has supplied the greatest number of mummies. The museums of Europe are full of the embalmed hierarchy. The plunder of the tombs has gone on for centuries, and they are still unexhausted. A similar state of society prevailed at Memphis, but that capital of the Delta was too exposed to the attacks of the enemies of Egypt to retain its importance after the rise of the neighbouring Semitic nations. The Hyksos had conquered it. The magnificent sepulchres of the early dynasties, as well as the humbler ones of the officers of their court, had been rifled at a most remote period. Hence, Memphis remained as an old religious capital, the centre of the worship of the god Ptah or Vulcan, and his avatar the Apis, till the days of the Romans; but its political importance had declined. Those, therefore, who plundered the sepulchres of Memphis found a less abundant harvest of mummies and their accompaniments than the devastators of Thebes. Under the Saites of the seventh century B.C. and Ptolemies, Memphis slightly revived, but the nation was expiring. The Greeks did, be it observed, no good to Egypt. They neither improved its art nor arrested its decadence. They perched their capital on the seaboard of the Mediterranean, and indolently governed an empire

once mighty, with a view to secure the transit trade of the East, and enrich the coffers of a corrupt court.

Of what race were the mummies :—the greater number of the Egyptian exhibiting at the earliest epoch certain negroid peculiarities, but intermingled with Semites on the northern and negroes on the southern border? The Egyptian of the sculptures has an upward elongation of head, receding forehead, delicate features, oblique eye, straight or aquiline nose, full lips, and ear placed high on the head. His colour was red, his form long and slender, his legs thin. The hair was plaited in curls. Similar peculiarities are traceable in the mummies, in which the features are thin and delicate; the hair sometimes curly, at others long; the forehead good; the teeth well preserved, but the front ones often worn; the height moderate. On the whole, the Egyptians were a well-proportioned race, and distinct from the other races by which they were surrounded. Immediately after death the preparation of the dead commenced. After the relations or some of the family had rushed into the streets and raised the funeral wail, the preparers of the dead, the *taricheutæ* or embalmers, were called to take possession of the body. So jealous was this fraternity of its rights, that care was taken to apply to the proper one of the district. They called for the corpse at night, and carried it to their establishment, for the costly and tedious preparation could not be performed in the precincts of a private house. Here the scribe traced with a light reed the place of the flank incision; a paraschistes operated with a so-called Ethiopian stone; and a rite of throwing stones at him for the supposed injury was ostensibly performed by the bystanders. As to the particular manner in which the preservation of the dead was to be effected, that depended on the age in which the deceased had lived, or the expense that the family was willing to incur. Models of the different manners were exhibited in the shops or establishments, and the extant mummies exhibit great diversity of the art. Ideas changed during 2000 years; new drugs were discovered; different processes invented. The earlier preparers seem to have relied on salt, wax, and wine; those of the middle empire on naphtha and bitumen: but, as the art declined and the wealth of the country grew less, salt and cheaper substances were employed. In the days of Herodotus the cost of preserving a body, in the first or best style, amounted to a talent of silver, or about £244; but the middle classes did not expend above 20 minæ, or £22, on the operation.

It is not necessary to detail all the processes and the curious anatomical facts, that the scientific examination of mummies has revealed. It is sufficient to state, that these processes occupied nearly 70 days, and that during this period the family kept fast, and mourning. When the body was preserved from decay it was enwrapped in linen, no other material being allowed. But before the final placing of the wraps, certain amulets were placed about the form to protect the body, and to assure the soul a safe delivery from the danger of destruction or purgatory. A flat tin plate of square shape engraved with a mystical eye, was placed on the flank incision. This represented the eye of the god Shu, one of the deities of light, and of itself was supposed to retain the vital principle. A series of pretty little amulets of jasper, felspar, and gold, were hung round the neck, and were supposed to prevent the deceased from being turned away from the gate of heaven at the west, to procure him food off the table of the sun, and to justify him against his enemies. As the Egyptian considered the heart to be the seat of life, a scarabæus with a special chapter, consecrated by special ceremonies, was placed above the region of that organ for its protection. The enwrapping of the mummy was a most artistic preparation, and the quantity of linen employed considerable as much as 700 yards, and 40 lbs. in weight, have been found. Coarser near the body, the wrappings become finer externally, and quantities of old material were employed, for either the families preserved the linen for the purpose, or else the agents of the embalmers traversed the streets from house to house, to secure an adequate supply. They were laid on wet, and kept even by pledgets. We find that the more finished parts of bandages a few inches broad, and several yards long, were used fresh from the loom with their blue selvages and and fringes, the coarser portions being composed of old shirts or other household linen. Several men were employed at the same time on the bandages; often they could not be finished at once. A scribe then wrote, on a bandage outside, the name of the deceased, to which he sometimes added the age at death, and the year of the king's reign when it happened. The last bandage of all mummies of some periods, was often of a pink colour dyed by an infusion of the *carthamus tinctorius*, at others it was formed of strips covered with the text of rituals traced in black, but no one rule prevailed. Over the outer bandage there was frequently a network of bugles and beads of blue porcelain. This net was the symbol of Osiris, whose body, when thrown by Typhon and his associates into the Nile, had been recovered by the nets of fishermen. Sometimes, pieces of beaded work with various devices worked in divers colours, and even inscriptions, were placed on the outer bandages. Many mummies had the pectoral plate or *uta*, an ornament bearing the same name as the word "health," which it perhaps symbolized, with a scarabæus in a barge, emblem, as it would appear, of Osiris adored by Isis and Nephthys. This scarabæus often bears the chapter of the Ritual for the protection of the heart. These beaded decorations are principally found about the sixth century B.C., and do not appear at the commencement of the art. At a still later period they are superseded by small gilded emblems of words, amulets in shape of the principal deities of the dead, and other charms which had a mystic meaning. In the Greek mummies which have certain peculiarities of type, there were often substituted wreaths of leaves for the network, and gold

tinsel by way of external adornment. Objects of use or ornament, according to the taste of the family, were often placed amidst the bandages. Now a papyrus or religious book, then a dagger or toilet vase, or the comb with which the beauty curled her flowing locks. Often the long hair of ladies was cut from their heads, made into a separate packet, and carefully deposited at their feet. The dead, in fact, were made as gay and artistic as the beads, bugles, tinsel, and colours could contrive to render them.

After all these decorations the labours of the embalmers were by no means ended. The mummy required a case, a description of which, as well as of other portions of the funereal accompaniments, will be given in a subsequent number.

ON SKETCHING FROM NATURE.

By Aaron Penley, Professor of Landscape Painting at the Royal Military Academy, Woolwich.

No. II.

SIR,—The accompanying drawing is taken from the entrance of Glenfinlas, near the Brigg of Turk and the Trosachs. I have selected it as my second subject in your magazine for its extreme simplicity of character, and because I see in it a great variety of broad masses of *form*, combining, as it does, mountain, moorland, and a ruddy picturesque Highland hut. I have given the scene exactly as I saw it, without addition or alteration. Indeed, there was no need for either, as every object was calculated to compose agreeably, and to produce a pleasing result. Nothing can exceed the charm of colour frequently found on old thatch. The patches of different grasses growing to seed upon it exhibit every description of tint; while the weather-stricken thatch itself assumes indefinite compounds of russet, brown, and purple greys. It is from such little "bits," that the artist gleans much knowledge of harmonizing and natural blending, enabling him to bring the force of his pallette into action, and yet keep clear of unpleasant or crude brightness. The lines of the cottage are broken by the position of several poles leaning against the roof; and as these have neither similarity in direction, nor equi-distance from one another, they present no stiffness or apparent *design*. There is also great diversity in the sloping roof; not only as regards colour, but also in its several layers or demarcations, which help to make up an agreeable, although broken, whole; while the chimney, with its slaty top, gives a point of darkness and intensity. The peat at the side of the cottage is well placed for giving depth of shade and warmth of colour. Such scenes as this the amateur should seek for his pencil; because, the component objects being few in number, there is little difficulty in dealing with them without confusion, or in tracing the manner in which the combinations of colours are effected. A far-off mountain, backed by light and flying clouds; a middle distance of broken and undulating moorland; a cottage by the roadside, based by patches of grass; a large fragment or two of stone; a stone wall; and three small trees, compose the whole of the scene before us; with the exception of the horse and cart, which I introduce to convey *action*, *force*, and *interest*. The mountain is beautiful in form, and its rugged outline desirable, to prevent formality. It is also so placed with one of its sides warm, and the other cool in tone, as to receive a breadth of light and shadow. The lines of the middle distance, being curved in different directions, assist very naturally to give elevation and dignity to it; and the warm citrine yellow tone, with purple and laky heather, serve to send it far away into aërial grey. There is often much difficulty in giving expression to a large mass of moorland or hillside, unless the surface is extremely irregular; and, even then, we are not made cognizant of those features of character so requisite to portray, until some sudden gleam of sunshine lights up the more prominent parts, or, on the other hand, some passing clouds produce dark and telling divisions by their cast shadows.

I would deeply recommend all whose pencil is employed on moorland scenery, to notice whence the several undulations spring, in what direction they continue, and where they terminate. It will be upon a correct disposition of these lines that distances will depend; for it is not unusual that several miles of space have to be expressed upon what would appear to a casual observer, nothing more than a flat surface void of interest. When alluding to the charming and varied effects of moors and downs, I would recall to memory the exquisite productions of the late Copley Fielding; because many of them are truly beautiful, and exhibit a most poetic and refined feeling for nature and art.

In the present drawing, there is, in point of colour, great simplicity, harmony, and contrast, with a broad effect of daylight. The sky and clouds are cool and light in tint. The distant mountain rises with much tenderness of tone, deepening towards the extreme outline. Opposed to this is the citrine or yellow-tinged moorland, with its delicate markings and shadows of warm russet purples; the yellows causing the greys to appear more aërial, and the half-toned shadows throwing the mass far into distance. The local tones of the motley-coloured roof, poles, and stone walls, give a soft appearance to the mass of moorland, placing it at once in the middle distance.

And, again, the broad grey shadow of the cottage side gives an increase of vigour to the local colours. The brightest lights in the drawing will be found on the cottage wall, it being requisite that these should be clear and attractive. Next in degree of light is the road, with the intervals between the patches of grass, and so diffused as to cause the eye to regard the whole of the foreground. The shadows of the stone wall to the left, and across the road, connect the sides of the drawing, and repeat the tones of grey dispersed throughout it. For this purpose also, the shadows on the fragments of rock are of much service, as well as those of a warm colour. The cart is so placed as to repeat the tone of the stone wall; and the black horse, to give a point of concentration; while the colour of the figures subdues the whole. The position of the trees, encircling the subject with their deep and broken greens, is also valuable.

The colours employed were, for the

Sky—Cobalt.

Clouds—Cobalt, sepia, and a little lake.

Mountain—Cobalt, lake; yellow ochre, shaded with cobalt and lake; a light wash of raw sienna and lake on the top, and of terre verte on the lower part.

Moorland or Middle Distance—A wash of yellow ochre and raw sienna over the whole. For the markings of shadows and forms, raw sienna, cobalt, and lake; after which a few glazings of raw sienna and lake, and of terre verte in the green shades between the several markings.

Cottage Roof and Poles—Cobalt, lake, and raw sienna; sepia being added for the deep shadows and markings.

Cottage Wall in Shadow—Sepia, lake, and cobalt.

Peat—Brown madder for the lights, and brown madder and sepia for the shadows.

Grass—Gamboge, burnt sienna, and indigo.

Trees—Gamboge, burnt sienna, and indigo in some depth of colour.

Shadow on Road—Sepia, lake, and indigo; a little Gamboge added for the stone wall.

Shadows of Large Stones—Sepia, lake, and indigo, with a glazing of terre verte.

Colour of the Road—Yellow ochre, a little lake, and sepia.

Warm Stones—Yellow ochre and lake.

Cart—Sepia and yellow ochre, shaded with sepia, lake, and indigo.

Figure—Lake, shaded with sepia.

Horse—Sepia, lake, and indigo.

Stones on the Cottage Wall—Modification of raw sienna, lake, cobalt, and sepia.

A HANDFUL OF SAND.

By W. B. Lord, Royal Artillery.

THE mariner nearing the coasts of England during the dark night and winter fogs, watches his charts anxiously, and hails with joy the appearance of "sand and shells" on the arming of the "deep sea lead," which, like a faithful diver, has plunged far down into the doubtful regions below, and brought back indisputable evidence of the due performance of its mission. To the explorer, traveller, and investigator of Nature's secrets, "Sand" is a page—perchance a volume—in the world's history. Every tiny rill and rivulet which pours its waters through ravine and valley, to lose itself at last in some passing river, brings with it, slowly but surely, grain by grain, specimens of the rocks and deposits over which its waters have for ages worn their way. Each winter flood and summer storm lends its aid to break down, disintegrate, and drift away the detritus brought down by the ever-fretting, ever wearing, influence of running water.

If you doubt as to the geological formation of distant hills and inaccessible mountains, consult a handful of sand from the nearest brook flowing from them, and much light will be thrown on the subject by the investigation. To examine sand, it has been my custom, after washing and drying it, to lay a well-mixed portion, say of the size of a shilling, over a sheet of clean white paper; to flatten out the pile until the particles are evenly distributed; and then with my pocket lens to scan them carefully. The boundless treasures so long buried in the wide valleys of California might have remained at rest and undiscovered to this day had not sand disclosed the golden secret, and thus it was divulged. One Captain Sutter, an old soldier of the American republic, had settled in the valley of the Sacramento, laid out a farm, built a mill, and regularly established himself. It was found that the "race" constructed to carry off the water which had passed the wheel was not deep enough for its purpose. It was therefore decided that the whole water-power should be turned on, and allowed to rush through, and deepen it. The pent-up torrent not only did the duty it was called on to perform, but overflowed the banks, carrying turf, sticks, stones, and sand far over the meadows. As the water drained off, and the sun shone out, the white quartz particles glittered like a thousand diamonds, and a handful was gathered by one of the Captain's people, when yellow grains as well as white were discovered, examined, and found to be gold. How the human tide flowed in endless throngs to the new El Dorado, and how splendid cities sprang into being where, a few months before, a herdsman's fire and a lean wolfish-looking dog or two were the only signs of occupation, need not be dwelt on here, as they are matters of history. Hargraves, too, tempted by the golden prospects held out in the new lands, quitted Australia, and

joined the gold-seekers in California. There the rocks and drifts struck him as being so much like those which he had left behind, that he, like Whittington, retraced his steps, visited the river-bed near his own home, gathered sand which told him the great gold secret, and unlocked the vast coffers of the Antipodes. Many other highly valuable alluvial gold and diamond washings are dependent on, and have been discovered by, the drifting sand borne ever onward by the giant strength of water. So vast and irresistible is that strength, that huge boulders which, when the river-bed is dry, the reeds withered and yellow, and the water-plants crumbled up like parched tobacco-leaves, look as though no earthly power could stir them from their beds, are rolled pell-mell over and against each other by winter floods or "*spates*" of molten snow that thunder down from distant mountains.

Each of these water-worn blocks lends its contribution to our "*handful of sand.*" The mineral veins and quartz reefs traversed and intersected by the crushing mass are laid bare, pulverized as by a mighty mill, and ground into particles and fragments little more than sand. These, with other atoms worn from the bed of the torrent over which the abrading masses have passed, are borne onward, and settle for a time, according to their gravity and size, to be again disturbed, carried onward, re-deposited, shaken about, fretted, rounded, and again crushed. Your veritable "rolling stone" gathers no moss, indeed, but obtains, like many waifs and strays on the stream of life, a particularly smooth surface instead. Onward and ever onward journeys our sand, forming at times "bars" across rivers and the mouths of harbours, silting-up lakes, —a process now going on in that of Geneva,— blocking-up channels, forming "sinks" for whole rivers to disappear in, and, in fact, doing its part to bring about many of the changes which the Earth's crust is always undergoing. On the burning desert and amongst the sterile dunes, sand holds high festival; and well do I know, from painful experience, what a tyrant he is, when whirling aloft like some huge pillar, curling round in mazy, spiral, onward march, the sand-storm is upon us, and we bow our heads in meek submission.

FRENCH ART.

THE PARIS ANNUAL EXHIBITION OF WORKS OF LIVING ARTISTS.

THE best idea of the extent of this exhibition may be conveyed by stating that the collection of paintings alone fills seventeen rooms, all of which are large, and three of them immense. Several others are appropriated to water-colour drawings, pastels, engravings, lithographs, and architectural studies and designs; and that, besides all, an extensive gallery of sculpture and models occupies the lower floor. The *chiffre* of the catalogue is the more astonishing that no artist is permitted to send more than two works in any one class, and that many only exhibit one. The number of paintings in oil is 1998; of drawings, pastels, miniatures, enamels, painted porcelain and earthenware (*faïence*), and designs for stained glass, 616. The sculpture class includes 390 works of various kinds; there are 75 sets of architectural drawings; 172 engravings, and 46 lithographic works. Last, come 41 works in painting, sculpture, architecture, and engraving, either the prize works of pupils of the *Ecole des Beaux Arts*, of the past year, or sent by those who are now passing the term of their prize scholarship in Rome or Athens. The quantity of works, however, is of little importance. The *Salon*, indeed, like almost all other general exhibitions, could be weeded to advantage. The grand question is—what is the quality of the works generally?

From various causes, illness amongst the rest, several of the most popular names are unfortunately absent from the catalogue. Cabanel (fils), Meissonnier (the elder), Baudry, Knaus, and Winterhalter, amongst painters; and Clasinger, Cavelier, Debay, Dubois, Guillaume, Jouffroy, amongst sculptors'; the two last-named, however, seldom exhibit.

There is a perceptible diminution in the number of official pictures, battle-pieces, and portraits, and certainly the exhibition gains greatly thereby. As regards portraits, it is believed that the jury has exercised considerable severity, of which recent exhibitions have certainly demonstrated the necessity.

The gallery will probably have been dispersed before these lines meet the eye of the reader; but as there are many to whom the doings and progress of the French School is no matter of indifference, we will notice a few of the most prominent works for their benefit. Two small pictures by the late Hippolyte Bellangé, "L'Escadron repoussé," and "La Garde meurt, le 18 Juin, 1815," have attracted great attention. The latter was touched by the artist on his deathbed, and is, after all, but an unfinished work, but full of sentiment and force. A few veterans of the guard stand up in the midst of a hecatomb of their fallen comrades, and one, with clenched fists, hurls his last defiance at the foe. In the other picture a cuirassier and his horse are both wounded, the man mortally; the animal has sunk to the earth, and its master is falling backwards in the saddle. Both pictures are worthy and most touching examples of the painter's genius, sad memorials of a glory that is passed. Bellangé was the last of the famous trio—Charlet, Raffet, Bellangé—whose pencils kept alive the Napoleonic fervour during the Restoration, and he leaves no equal behind him.

The picture that attracts the largest amount of attention, after those of Bellangé, also presents a scene of blood, an episode in the struggle of the Poles—"Warsaw, the 8th April, 1861,"—a crowd of victims, men, women, and children, kneeling around the column of Sigismond, are hemmed in on all sides by Russian troops, and falling beneath the bullets of the infantry. It is a scene of intense horror, represented with great power. The painter is a young man, son of M. Robert-Fleury, and pupil of Paul Delaroche and Leon Cogniet. He will, or rather has already, won his spurs, for he is sure to receive one of the medals; and, some think, the medal of honour. Another young artist, Adolphe Schreyer, who received a medal last year for an admirable picture of a charge of artillery at Traktir, has "A Charge of Cuirassiers" in the *grande salle* this year; but, though clever, it is not equal to his former work. M. Protais, another painter of military subjects, or, more strictly speaking, of the joys and sorrows which belong to a soldier's life, exhibits a remarkable work. A young infantry soldier, wounded and dying in a ditch, amid a profusion of nature's wild and lavish beauties; the pale, haggard face, the sunken eye, the prostrate form, the flitting life in the midst of the long fresh green grass and the bright flowers, make up an intensely touching picture.

In this central chamber of honour are also a remarkably fine, though peculiar work, by a well-known artist, M. Courbet, entitled "Remise aux Chevreuils," deer gathering together under the shadow of a group of beeches; a picture of a tribe of nomad Arabs crossing a stream, by Fromentin, purchased by his excellency Khalil Bey; two exquisite small forest scenes, by Rousseau; a charming work entitled "Vines and Elms," by Nazon; and two of those extraordinary reproductions of objects of art, embroidery, and flowers, for which M. Blaise Desgoffe has so well deserved a reputation. The caskets, cups, and table-covers in these two works are as near perfection as can well be imagined; the rendering of agate, glass, ivory, and velvet, leaves nothing to be desired. If M. Desgoffe's fruit were but as pulpy as his wine is liquid, we should pronounce him all but perfect in his speciality. Nearly the whole of one side of this great room is filled by an ambitious work by M. E. Dubufe, "The Prodigal Son," an immense composition, exhibiting considerable talent and laudable daring, which may contain the germs of future eminence. The above are not all the good pictures in the *grande salle*, but they are the most remarkable.

In the first of the lettered or alphabetical rooms (which do not include the *salle d'honneur*, and two others devoted to very large canvasses), the following pictures, amongst others, merit attention:—"Un Cauchemar," by Antigua, a sleeping, nude, female figure, with a demon, of the imagination, resting his elbow on the victim's chest; "Sérénade à Echo," a bevy of merry damsels of Haut-Aragon listening with secret delight to the songs and guitars beneath their window; a charge of cuirassiers, by Armand-Dumaresq; and a view of the Villa Torlonia, by Achenbach.

The adjoining room is glorified by a large and brilliant work from the pencil of Auguste Bonheur, entitled "Le Dormoir:" a group of cattle are being collected for the night, on a mossy spot, overshadowed with pine-trees, while the slanting rays of the setting sun shine through the autumnal foliage, and fall in exquisite "chequered light" on the rough ground, purple with heather. This is the finest work that the artist has yet produced, and a smaller painting called "Le Plomb du Cantal," is worthy of the same pencil. Rosa Bonheur has not exhibited for some time in Paris; but three of her family are in the catalogue this year, namely, Auguste Bonheur, of whom we have just spoken; Isidore Bonheur, the admirable sculptor of cattle; and Madame Peyrol, whose maiden name was Juliette Bonheur, and who exhibits this year two excellent studies of sheep and lambs. "Rembrandt going to an Anatomical Lecture," by a young Dutch artist, named Bisschof is a very remarkable work, the property of the historical gallery of Amsterdam. Madame Henriette Browne is unfortunately only represented by a single portrait, which, however, is a work of art. M. Boulanger contributes a rather oddly conceived, but cleverly executed picture of the interview of Catherine I. with Mehemet Baltadji, in 1711; and M. Boulangé, two charming forest scenes.

M. Chaplin exhibits a panel painted for the hôtel of Prince Demidoff, glowing with nymphs and cupids, and entitled "A Dream." M. Chintreuil has a very remarkable landscape, entitled "The Country under a March Wind." M. Corot has two landscapes in his usual grey style, but scarcely exhibiting his usual delicacy; and M. Courbet—who has charmed all the world with his retreat of the deer already mentioned—has set all the critics and connoisseurs by the ears, with his "Femme au Perroquet." The lady reclines in an exceedingly uncomfortable position—her head lower than her body, and, with one hand raised, supports the bird. The head and hair are certainly far from perfect, but the work exhibits great study and power of pencil. The truth is, M. Courbet's work is made the occasion for a removal of a feud which has existed for some time in Paris, and which may be expressed in a few words. "Is it well to admit in public exhibitions studies of the nude, which are not pictures, properly so called, but only artistic exercises?" M. Courbet is not the most glaring offender; for, while there are far too many figures which represent nothing but mere form, and some few to which exceptions might be taken on other grounds, the "Femme au Perroquet" has both subject and action, although both are certainly of a slight kind and sentiment is entirely wanting. But M. Courbet is worthy game from his position and real talent, and a little also from a certain amount of eccentricity; and it must be admitted that the objectors might have fixed upon more glaring instances of the practice to which they object. M. Courbet is *hors concours*, having received all the ordinary medals; but, should he obtain the medal of honour, or the cross of the legion, the "Nudists" will be triumphant, and the next exhibition may be expected to be *très-décolletée*.

The Daubignys, father and son, contribute four pleasing landscapes—M. Delamarre, a daring use of positive colours in his Chinese merchant, counting his money—M. Gustavo Doré, a soirée in the campagna of Grenada, a group of ladies in their black mantillas, listening to the music of a knot of peasants; and a landscape in Savoy. M. P. E. Frère—whose works are well known in London—exhibits an admirable group of young girls at work, under the title of "L'Ouvroir à Ecouen." Well studied and well painted, this humble, industrial interior is one of the smaller gems of the exhibition.

M. Gérome's Cleopatra and Cæsar is the *cheval de bataille* of the present year's exhibition. The artist holds an eminent position, not only in public estimation, but officially. He has won a great name by his Cæsars, his Phryne, and other works. Of the three professors of painting in the École des Beaux Arts, he is the only one who has not yet received the medal of honour. His name was placed at the head of the jury list this year; and, lastly, his principal picture is remarkable not only for its subject, but for the accidental circumstances connected with it. It was painted to order for the embellishment of a new mansion in the Champs Élysées, which is already celebrated before it is habitable; it was refused on account of the sum demanded for it by the artist, namely 40,000 francs, and was immediately purchased at that price by Mr. Turner. M. Gérome has taken for his text the passage in Plutarch's life of Cæsar, which states that the famous queen, the "Serpent of Old Nile," caused herself to be carried nearly naked, in a carpet, into the presence of the great conqueror, in the Palace, at Alexandria. M. Gérome has treated the subject in what is called the néo-classic style, and his Cleopatra is not the fascinating, voluptuous queen of ancient literature and modern art, but the swarthy Egyptian of the painted walls of her own country. It may be that the painter is archæologically correct; but, undoubtedly, the picture loses greatly in artistic interest by such treatment. The question almost invariably put on approaching the picture for the first time, "Is that the Cleopatra?" is the popular condemnation of the mode of treatment adopted. The figure of Cæsar is insignificant, while the slave, one of the least important figures in the composition, is universally recognized as the most successful. But M. Gérome is a remarkable artist, and this, as well as a small but repulsive picture, deserves careful study, on account of its admirable manipulation and general tone. Their greatest fault—and it attaches to all M. Gérome's works—is the absence of movement and life-like energy. In the expressive language of the French studio, all M. Gérome's characters *posent*.

M. Hamon is another of the accomplished masters of the French school of the present day; he, too, is néo-classic, but with this remarkable difference, that while his compositions are formal and sculpturesque, his figures are exquisitely soft and lovely. His representations of Greek domestic life, are too well known by their engravings to require description. Upon the present occasion he has sent us, from his retreat in Garibaldi's isle of Goats, a picture of more than usual importance, a subject of the highest poetical character, "The Muses mourning the destruction of Pompeii." The "Sisters Nine," view from the house-tops, the work of the burning mountain, Clio and Urania are seated in melancholy contemplation, while Terpsichore prostrate, with her face to earth, weeps the desolation that has fallen on the once laughing city, in which she must have been one of the most cherished of the Muses. The composition is grey, dreamy, vapoury, and in certain portions somewhat weak, but the figures of Clio and Urania, especially the latter, are exquisitely beautiful, and would alone be sufficient to save the existing school of French painters from the charge of a

total want of pure poetic sentiment. If M. Hamon's Clio and Urania were professors in the Academy, the "Champ de Mars" would not contain the students of history and astronomy, and the power of Venus would pale in the presence of their purer beauty. M. Hébert, whose Eastern woman at the well, and other charming compositions, are so well known through all the world of art, deserves severe reprobation for contributing to the salon, in two years, nothing but four charming portraits. The best of these cannot be accepted as a sufficient excuse, yet no one with an artistic eye will pass by the Pre-Raphaelite figure of the tall boy, or the charming sketch of the little girl in the present exhibition. One of the most remarkable small works in the *salon* of this year, is the "Antichambre" of M. Heilbuth, a Hamburg artist,—a waiting-room with an oaken bench, on which is seated a long bony lawyer-like figure in black, while a fat-faced, thick-lipped, small-eyed old servant, in a faded green velvet livery, leans over the high back of the seat, and talks to the waiting visitor. The picture is bare, dry, hard, and the subject unromantic, unpicturesque, uninteresting to the majority; but the artistic contrast of the two faces, the painting of these and of the hands, and the drawing in general, are beyond praise.

The two studies of Eastern women "Femme fellah," of Asia Minor, and an "Arménienne" of the Caucasus by M. Landelle, are very pleasing productions, especially as regards picturesque costume.

One of the most popular pictures here is "Margaret trying the Jewels," by M. Merle. Gocthe's sweetly sad heroine essays the effect of the terrible lures offered to her by the old neighbour, while Mephistopheles clings to the back of the girl's chair, and encourages her vanity. The composition is somewhat flat and conventional, but Margaret's face is very lovely, and the rendering of the various tissues of her dress is excellent. M. Gustave Moreau, whose Sphinx created so much admiration and controversy two years since, and has received all the honours of engraving, photography, and enamel, and who won a second medal last year, contributes two works this year,—a young girl bearing the head of Orpheus, and his lyre cast into the Hebrus by the murderous nymphs he had slighted; and, "Diomed devoured by his Horses." These works certainly disappoint even M. Moreau's most ardent admirers: the former certainly presents some beauties amid glaring faults; the second is a sad mistake. M. Moreau forms with MM. Gérome and Hamon, a curious trio of néo-classic painters, strangely differing, withal, amongst themselves. M. Gérome sins on the side of hard correctness; M. Hamon is all sentiment; and M. Moreau all colour, the rainbow scarcely sufficing for his palate. All three want action and mobility; all are steeped in mannerism; yet all are artists of great talent, if not of genius.

M. Ribot, a medallist of 1864 and 1865, exhibits two works, Christ and the Doctors, and the Flute Player. These works belong to a new school of realistic painters, and we name them simply as an indication of one phase of French Art of the present moment.

As regards the sculpture, we fear we must say that there is no very great work amongst the contributions of this year, though many are well worthy of notice. Such are those of Barré, Isidore Bonheur, Cain, Carpeaux, Chapu, De la Planche, Feugères des Forts, Garnaud, Gantier, Heizler, Marcellin Loison, Marcello (the pseudonym of the Duchesse Castiglione Colonna, whose "Head of the Gorgon" has just been purchased for the South Kensington Museum); Moreau, Olivia, Prouha, and perhaps some others.

Few tasks are more ungrateful than that of giving a short account of an important collection of works of art. Every effort towards the beautiful, every endeavour to raise the standard of art, and thereby to elevate the taste of the world, is in itself so praiseworthy, that every one but a snarling critic would willingly laud each attempt, wherever apparent, and gloze over every failure, however glaring. It has been well said, that those who are unacquainted with the secrets of art cannot appreciate the labour and the talent that are often employed in the production of even a bad picture or model; but as art is a kind of lottery, in which the prizes are few, and as mediocrity in it is neither admirable nor useful, it is the duty of a critic, even when he cannot point out all the mistakes, to laud nothing but that which deserves commendation. Critical observers will find beauties for themselves, but the uninitiated have a right to expect, in a popular work, laudation of that only which is worthy of admiration.

Visitors to the exhibitions at the Paris *salon* must not expect to find many great examples of art; the highest elements, great poetic sentiment, patriotic feeling, moral teaching, and æsthetic beauty, are rare here as elsewhere; but they will not fail to find a vast field for study. Comparing the present with past exhibitions, it may be said, in general terms, that there is less conventionality than there was; that nature has more share in the productions of art; that there is more independence of thought, less servile imitation, more feeling for the phenomena of nature, an improvement with respect to colour, and a decided advance in all the material portions of the artist's profession.

An arrangement which deserves notice has been made this year with respect to the light in the picture galleries. It will be remembered that the Palais de l'Industrie, in which the exhibition is held, has a glass roof, and many complaints have been made of the effect of the light upon the pictures. The directors have therefore suspended semi-opaque canopies in several of the rooms, by which the spectators are screened from the light, which falls only on the walls. The general opinion is that the arrangement is satisfactory, provided the canopies be not too low or too opaque. Considering how much the appreciation of works of art depends on position and light, every experiment of this kind is deserving of serious attention.

The liberal measures now in force relative to these annual exhibitions deserve special attention. The jury entrusted with the reception or rejection of the works sent in for exhibition, and with the settlement of the awards, is elected under the new rules, which place the selection of three-fourths of the jurors in the hands of those artists who have themselves received medals or other distinctions; painters, sculptors, architects, and engravers each voting for jurors in their own section only. The other members of the jury are nominated by the administration of the department of the Beaux Arts. This system gave great satisfaction last year, and, looking at the list of jurors for 1866, it can scarcely be otherwise on the present occasion. The painters elected on the jury are MM. Gérome, Cabanel fils, Bida, Meissonnier, Français, Fromentin, Carot, Robert-Fleury, I. Breton, Hébert, Dauzats, Brion, Daubigny, Barrias, Dubufe, and Baudry; and the sculptors are MM. Guillaume, Barye, Cavelier, Dumont, Jouffroy, Perraud, Daumas, Cabet, and Paul Dubois. Of these, six are members of the Academy of Beaux Arts in the French Institute, six are professors of painting and sculpture in the École des Beaux Arts; M. Robert-Fleury was lately director of the same school, and is now appointed superintendent of the French school in Rome, and M. Paul Dubois won the grand prize in sculpture for his charming statue of the young "Florentine Singer" last year. It would, we think, have been very difficult for the body of elective artists to have made out a list that would have more completely justified the confidence placed in their judgment by the Government, which has, by its liberality in this matter, at once put an end to almost all ground of complaint against the authorities respecting either the admission and placing of the pictures and other works of art, or the award of the prizes. A still further change has been made with respect to the prizes, which, in fact, gives to the public an indirect voice in the distribution of the medals. It is the custom to close the doors of the *salon* for a few days when the time of the exhibition is about half expired, in order to make certain changes in the disposition of the works, to correct mistakes, and to bring important pictures into more favourable lights; and it is not until this change is made that the awards are now announced, so that the juries have the benefit of public opinion, as well as an extension of time, for completing and revising the list of honours to be bestowed. This is an admirable arrangement: it aids art education by forcing the public, as it were, to think for itself for a time, and it

gives fresh interest to the exhibition just at that middle period when attention might otherwise begin to flag.

In addition to the ordinary medals, of the uniform value of four hundred francs, of which sixty-nine are awarded; namely, forty in painting; fifteen in sculpture, seal-engraving, and die-sinking; six in architecture; and eight in the sections of engraving and lithography. Two medals of honour are likewise bestowed when any works are deemed of sufficient merit to call for such distinction. New regulations respecting these prizes have been established on the present occasion. The prizes, or medals, are of the value of four thousand francs each, and may be given in any of the sections, and even both in one section. These are now to be awarded by the direct vote of all the exhibiting artists who have received a medal upon a previous occasion. The number of artists entitled to vote this year is 506, and the vote will be considered null unless one-third of these take part in the ballot. If the majority of the voters insert a blank ticket in the urn, no *prix d'honneur* can be awarded; but should this not be the case, and yet no artist, or only one, should have a majority of votes, a second ballot must take place in the following week in favour of the ten artists who obtained the largest number of votes on the first occasion. Finally, should the second ballot be indecisive in its results, a third must take place, when the three artists at the head of the last list become the sole candidates, and the one or two to whom a majority of votes have been given receive the *prix d'honneur*.

In addition to all these prizes, the Emperor has created a still higher distinction, a quinquennial prize of a hundred thousand francs, to be provided for out of the civil list, and to be called the Emperor's grand prize. This is to be first awarded in the year 1869, provided the special commissioner appointed for the purpose should deem any work in painting, sculpture, or architecture deserving of such high reward. It is scarcely necessary to add, that the nomination of artists to the Legion of Honour is another mode which the Emperor possesses of rewarding and encouraging artistic merit; most of the eminent artists are Chevaliers, several are Officers and Commanders, and M. Ingres is Grand Officier of the Order. Mademoiselle Rosa Bonheur received the Cross from the hands of the Empress not long since.

There is still another and highly attractive form of recompense, namely, the purchase of works exhibited in the *salon* for the public galleries. The entire amount received from the public at the doors of the Exhibition is devoted to this object, and an additional sum has been recently voted. The most important acquisitions are placed in the gallery of the Luxembourg, and the rest are distributed amongst the numerous museums in the provinces.

The list of artists now living who have received medals of all classes and decorations includes at least thirteen hundred names, the oldest being M. Ingres, who won the Grand Prix de Rome in the year 1801, and was created Senator in 1862.

THE EAST.

THE great interest felt by Englishmen in matters connected with the East, not only from an antiquarian, but also from a political and commercial point of view, will render the following notes, just received from a valued correspondent in that quarter of the world acceptable to many of our readers:—

CONSTANTINOPLE.—The great fire fortunately did not destroy any monument of architectural or archæological importance. The Government is prosecuting its designs of architectural improvement so long conducted by H. E. Edhem Pasha, Minister of Public Works. The new streets will be connected with those already laid out under his auspices on the sites of former fires, so that in a few years' time Constantinople will be a city of fine streets as well as of remarkable monuments — a change which could scarcely have been brought about without some such calamity. The grand street leading from the strand to the Porte, and the heart of the city, already shows the nature of these improvements; it has been planted with trees in the manner of the Paris boulevards. The new palatial front of the Seraskierat comes out with good effect; the kiosks at the corners, constructed in varicgated marbles, and in a mixed style composed of Saracenic and modern Italian, are really magnificent; but they are said not to satisfy the expectations of the Sultan. The practical character of the Turkish mind exhibits itself in these improvements, for, wherever practicable, rows of shops have been formed in the basements of the new buildings. The coppersmiths' street has been transferred to the Seraskierat, and the dealers look infinitely more consequential in their new abodes. The most remarkable improvements made in other quarters are those at Tophanch, but the whole line of the suburbs on the Bosphorus is being gradually opened out.

At Pera, fine new villas continue to spring up, and one of the most remarkable from an artistic point of view is that built by Colonel Messoud Bey, the Director of the Statistical Department. A new French theatre has been opened this season, but, except as regards the large size of the interior, presents no remarkable features. The English Memorial Church is now assuming considerable proportions.

Edhem Pasha has determined that the new buildings shall be constructed of stone; he has abolished local duties on building materials, and is taking measures to encourage the regular supply of stone, bricks, and lime. Ransome's company is applying for a privilege from the Turkish Government for the manufacture and supply of artificial stone.

Improvements are being made at the Sublime Porte, but nothing of a monumental character. The public offices in the Tijaret have been repaired and rearranged, but the complete demolition of the ancient and ruinous buildings is only a question of time and money.

The University building remains *in statu quo*, and nothing is known respecting Edhem Pasha's Museum, the materials of which are accumulating in the basement of the new building.

The Treasury is suffering from a bad fit of its chronic embarrassment, but the general prosperity of the country is clearly shown in the rapid increase of superior buildings.

The long shore of Galata is being rebuilt in a good style, and will be connected by wide streets with Tophaneh and Pera.

Upwards of £50,000 has been collected for the widows and poor house-owners who suffered by the fire; and, besides this, the Viceroy, the Sultan, Prince Mustapha Pasha, and others, are rebuilding many houses and some public edifices at their own expense.

The burnt portion of the Seraglio remains untouched at present.

No discoveries of importance have been made in Asia Minor of late. Coins continue to pour into Smyrna from the interior since the cessation of the local quarantines; most of these have been forwarded to Europe under commissions from collectors; one considerable series of Lycian coins has been sent to Mr. Waddington, of Paris.

The excavations at Ephesus have totally failed to bring to light the remains of the temple of Diana; in fact, they were mere scratchings, quite beneath the object in view. At present the efforts of the explorers are principally directed to the Great Theatre, and it is said, but without sufficient authentication, that a good statue has been found in the proscenium, and forwarded to the British Museum. If the excavators were placed under the superintendence of a competent archæologist or architect, Ephesus might still yield good results. The publication of the remarks of M. Ernest Rénan on the topography of Ephesus is awaited with curiosity.

The inscriptions of Mr. Hyde Clarke from Ephesus and Smyrna are now being packed to be forwarded to the University of Oxford, to which he has presented them. Most of them have been published in the "Suscriptions de l'Asie Mineure." M. George Tuson, Student of the Royal Academy, has visited Smyrna, and obtained some good commissions. Another artist, Mr. Svoboda, has sent home some landscapes of Ephesus and Palmyra for a patron at Liverpool.

A successful attempt has been made to photograph the Sesostris, and likewise the Niobe, which presented considerable difficulties. Mr. Frank Calbert has, it is said, been collating his observations in the archæology of the Troad for the new edition of Murray's Turkish Guide.

The reduction of the French Budget is likely to have a bad effect on the expenditure for archæological purposes which has done so much for the exploration of Asia Minor and the East. The Dilettanti Society appears to have abandoned its expeditions under Mr. R. P. Pullan. The last work received here on the archæology of Asia Minor is that of Messrs. Tercier and Pullan, and we are looking with interest for the publication by the French Government of the account of the mission of M. Georges Perrot, which is now in the press.

An English church was opened at Boujàh on Easter Tuesday; it is in the Early English style, with a small spire or pinnacle. The French are building at Smyrna a large Roman Catholic cathedral, and M. Lattry is erecting an immense Greek casino. The terminus of the Casaba railway is a plain stone building, only relieved by windows, and behind it is a neat iron station shed.

The new palace of the Governor-General, and the promised quay, are not yet commenced, but a fine new road has been opened to the marine suburb of Kara Tash.

A local artist,—a M. Cramer, who has studied for a short time at Dusseldorf,—has worked up from a photograph a large portrait of the Sultan Abdul Azis, for which he says he has refused 20,000 francs; he intends to present the work to the Sultan, with the idea, possibly, that he may not in the end be a great loser by that disinterested act of homage.

REMARKS UPON SIMILAR FORMS OF BUTTERFLIES FROM SIMILAR CLIMATES.

By Arthur G. Butler, F.Z.S., Assistant, Zoological Department, British Museum.

IN the study of the beautiful works of Nature, there can be few things more interesting or instructive than the careful observation and comparison of the numerous allied or mimetic forms of animal life. Many of these forms so closely resemble each other that only the most minute examination of their several parts can discover any appreciable differences, although they may perhaps belong to separate families or races, whilst others apparently more distinct prove only to be varieties of one and the same species; and, indeed, it frequently happens that precisely the same forms may be met with in totally different localities. Whether differences in structure and appearance have been gradually developed, or whether they have existed in their present condition since the beginning of time, is a question that has been much discussed, and concerning which much more might still be said: it certainly appears extremely unlikely that Nature, with her wonderful powers of design, should have originally produced so great a repetition of the same pattern, with but slight variations; surely it is more reasonable to suppose that external aids have gradually developed these petty changes. Is it not as likely that any other animated being should, in the course of time, be changed, as that an Englishman should gain the features of an American; and may we not with reason imagine

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that all closely-allied forms have sprung from one type, as that the many races of men should all have had one common origin?

It is not, however, our intention to discuss the origin of species, but rather to point out some of those extraordinary resemblances which we have met with amongst the numerous and varied species of the exotic butterflies, and more particularly with regard to the similarities which exist in similar climates.

It is undoubtedly a fact that the Lepidopterous Faunæ of similar climates, depending as they mainly do upon the botanical resources of the country, must of necessity agree to a very great extent: thus many of the insects from climates similar to our own are identical with our species, and others are so nearly allied that only a practised eye can readily distinguish them.

Some of these forms have received new names, in consequence of a prevailing idea that the same insect cannot occur in two widely-separate localities, and thus the study of this branch of zoology is rendered more difficult, species being made which but perplex the student, so that at times he will almost wish his specimens sensible of their own distinctiveness, that he might merely have to say, with the *Duke* in the "Comedy of Errors"—

"Stay, stand apart; I know not which is which."

Within the last few months a very interesting collection of insects has arrived from Hakodadi (North Japan), and, as most of the species are very similar to, and many of them identical with, our own, they will perhaps form the best illustration of the foregoing remarks.

The following British forms are in this collection:—

1. *Papilio Machaon*, Linnæus. (*Eastern form*, having a narrower blue band in the hind-wings and all the markings of the under-side less distinct.)
2. *Leucophasia Sinapis*, Linnæus. (*Variety* with the front-wings rather elongated.)
3. *Aporia Crataegi*, Linnæus.
4. *Pieris Rapæ*, Linnæus.
5. *Pieris Napi*, Linnæus. (*Variety* nearly twice as large as the British insect, the lowest spot on the front-wing of the female extended along the inner margin to the base of the wing. Allied to *Pieris Ajaka*, Moore, Proc. Zool. Soc., 1865, pl. xxxi., fig. 16. Himalayas.)
6. *Colias Hyale*, Linnæus. (*Form found in Germany and the East:* the wings of a brighter yellow.)
7. *Pyrameis Cardui*, Linnæus.
8. *Limenitis Sibilla*, Linnæus.
9. *Argynnis Adippe*, Linnæus. (*Variety* with silver spots near the apex of the fore-wings, on the under-side; very like *A. Jainadeva*, Moore, Proc. Zool. Soc., 1865, pl. xxx., fig. 1. Himalayas.)
10. *Polyommatus Argiolus*, Linnæus.
11. *Chrysophanus Phlæas*, Linnæus. (*Variety* with a dark spot in the centre of the fore-wings.)
12. *Pamphila Sylvanus*, Fabricius.

The following are also somewhat similar to the British ones, but must be considered as specifically distinct:—

1. *Anthocharis Scolymus*, Butler, Proc. Linn. Soc., 1866. (Differs considerably from our *A. Cardamines*, having the apex of the fore-wings produced into a distinct hook, the orange spot of the male much smaller, and the greenish markings of the under side differently arranged. The intermediate form between this insect and our own is *A. Genutia* of Godart, from North America.)
2. *Colias Pallens*, Butler, Proc. Linn. Soc., 1866. (Differs from *C. Hyale* in being much smaller, the front-wings much more narrow and long, and of a paler colour.)
3. *Argynnis Midas*, Butler, Proc. Linn. Soc., 1866. (Differs from *A. Paphia* of Linnæus in the more squared hind-wings, the absence of the black streaks upon the nervures, the more rounded front margin of the fore-wings, the larger spots, the basal bands of the hind-wings being replaced by spots; below, it chiefly differs in having only one central silvery streak in the hind-wings, and all the other markings much paler.)
4. *Polyommatus Euphemus*, Ochsenheim. (Only differs from *P. Arion* in the spotting of the under side; the marking of the upper side is variable in both species.)

There are also several species of butterflies similar to some of the other European forms; the moths bear the same relation to our species which exists in the butterflies.

Several other collections have, from time to time, arrived from Northern India, Syria, &c., in all of which the same curious resemblances have existed.

Explanation of Plate.

Fig. 1. *Papilio Machaon*, Linn. England.
2. „ „ Linn. Japan.
3. *Leucophasia Sinapis*, Linn. Japan.
4. *Pieris Napi*, Linn. England.
5. „ „ Linn. Japan.
6, 7. *Anthocharis Cardamines*, Linn. England.
8, 9. „ *Genutia*, Hübner. North America
10, 11. „ *Scolymus*, Butler. Japan.
12. *Colias Hyale*, Linn. England.
13. „ *Pallens*, Butler. Japan.
14. *Argynnis Paphia*, Linn. England.
15. „ *Midas*, Butler. Japan.
16. *Polyommatus Euphemus*, Ochsenh. Japan.

[The above remarks, from a valued correspondent, will, we trust, serve to impress on our Entomological readers the necessity for close observation and careful note of the varied and delicate hues found so richly developed in the charming tribe of insects he has devoted so much attention to. The almost imperceptible shading, and gradation of tint and colour, tell their tale to the practised eye as clearly as do equally minute anatomical differences. These, when unobserved or heedlessly passed over, lead to much confusion and sacrifice of scientific

accuracy. The first glance too often leads the explorer and traveller to jump hastily at false conclusions, and induces him to give names to strange objects in accordance with his ideas of resemblance to others long familiar, no matter how faint that fancied resemblance may be. Hence we have "Cape Pigeons," which are no more pigeons than wild geese; and "Cape Salmon," which are not salmon. The "robins" of the United States are no robins at all, and enjoy none of the love and privileges accorded to their more fortunate namesakes on this side of the Atlantic. Again, we say advisedly, let no man heedlessly try the strength of his teeth on an "Indian wood apple," simply because it is called "an apple." He had far better make an attempt on a four-pound shot of Woolwich pattern at once, than try his powers of mastication on one of these same apples. The cherry, of Australia, too, has a disagreeable habit of growing with its stone outside the fruit, and of being highly unpalatable into the bargain; whilst the pear of that favoured land would, if duly fitted by a clever cabinet maker, and properly polished, make an excellent knob for a street door. To the inexperienced, these "home names" carry their own charm with them, and lead to all sorts of indiscretions, which are only to be checked by the hard rubs and painful straits that experiences of travel are sure in the end to bring with them. "A cabbage tree" is a species of palm nowise related to the cabbage family. Do not, then, because some insect is said to be simply a "wasp," or "only a beetle, exactly like lots of others we have seen," be induced to pass it without investigation. See for yourself what sort of "wasp," and what description of "beetle," it is. Take nothing for granted, and do not grudge the trouble of minute examination.—Ed.]

REVIEWS.

Madagascar and the Malagasky. By Lieut. Oliver, Royal Artillery, F.R.G.S. (Day & Son, Limited.)

It is strange that an island so long discovered, favourably placed for commercial intercourse, and rich in natural productions as Madagascar, should have remained so long almost a "*Terra Incognita*;" and it is to be hoped that the work now before us, by Lieut. Oliver, Royal Artillery, on the "Malagasky and their Customs," may serve to direct more general attention to the capabilities of this fertile spot. The author had very excellent opportunities, having been a member of the suite of Major-General Johnson, who, in June, 1862, was deputed by the Governor of Mauritius to convey to King Radama II., who had just mounted the throne, an autograph letter from her Majesty the Queen of England, and a collection of presents, comprising—a quarto family Bible; a scarlet silk umbrella; a silver gilt tankard and goblets; Wilkinson's rifle; gold mounted field-marshal's scimitar, and sword-belt; a field marshal's uniform complete; a full-length portrait of her Majesty; and a set of musical instruments for a band of twenty-five performers. The mission was received with much distinction by king Radama—who, as is well known, has many pretensions to civilization—and remained about the capital until his Majesty's coronation in September. In his notes on this ceremony, the author gives us glimpses of international jealousies which we fear bode no good to the islanders. "Notwithstanding," we read, "the French party had used all their influence to induce his Majesty to don a magnificent suit of royal robes brought from France, Radama persisted in his original intention of being crowned in English uniform, and wore accordingly that of a British field-marshal, which we had presented him with from the Queen. The Jesuits set about a report that they had crowned the king privately, with all due Roman Catholic ceremony before daylight; but this I cannot believe. The Jesuits, however, have spread such scandalous reports about the bishop, Mr. Ellis, and the Nonconformist missionaries, that their veracity is not to be depended upon." Poor Radama II.! Poor Madagascar! say we, if the Lieutenant's observations above cited are accurate and reliable. The wild, romantic scenery, and luxuriant tropical vegetation of the island are so pleasingly and graphically described, that we cannot resist giving the subjoined extract:—

"In spite of all the wet and difficulties of the road, the good spirits of the Marmites, toiling under their heavy burdens, were indomitable. Imitating the lemurs' cries, they would attract these handsome, soft-furred animals (which take the place of monkeys in Madagascar), till they would come quite near, springing and swinging from bough to bough, supported by their convolute tails. The vegetation we passed to day was wondrous. Besides innumerable large timber trees, their vast limbs covered with litmus, lichens, orchids, creeping ferns and parasites, palms of numerous varieties shot up to a tremendous height. The candelabra-like pandanus exhibited a thousand fantastic shapes, and various bamboos shook their feathery plumes, like moustrous hop-plants, whilst magnolias, myrtles, fig-trees, tree-ferns, with their umbrella like canopies, filled the space between. Here, in a humid atmosphere, and under a tropical sun, the spontaneous growth and decay of vegetation has proceeded without interruption for centuries, presenting scenes unsurpassed in the world. The scenery, indeed, is never to be forgotten, especially one part of the road that wound round the edge of a rapid torrent, which, flowing under a gigantic table of granite, fell in a foaming broad cascade, into a cauldron hollowed out of the massive rock beneath. The ravine formed by the torrent was superb, and the cascade, swollen by the rains which had now ceased, was seen to its best advantage. The granite-table formed a titanic bridge over the torrent, and holes worn in it by eddies during past centuries showed the hissing waters beneath. The magnificent foliage met overhead, entwined with wonderful creepers, shutting out the rays of the tropical sun, and throwing a sublime gloom on the scene, lightened here and there by the bright colour and delicate young fronds of the tree fern. We stopped awhile to breathe and admire. Everything was dripping—trees, rocks, ferns, parasites, and creepers, ourselves also, whilst our marmites steamed under their exertions. The road was much easier to travel where it was rocky; but oftentimes we would come to sudden chasms and precipitous slopes, slippery with clay, mud, and water. It was no joke to meet—as we once or twice did—one of the numerous herds of cattle, on their way to Tamatave, from the capital, in one of these gullies. They are forced over the edge of these places, and slide, roll, or tumble all the way down, without being able to stop themselves, till they are brought up in the soft mud at the bottom. Magnificent creatures many of them were, all destined to supply the carnivorous propensities of beef-eating John Bull, at Mauritius, and, in a less degree, of his Gallic neighbours at Réunion."

The work is tastefully got up, and the twenty-four illustrations, in very excellent lithography, show that the author combines with his literary taste no mean ability as a draughtsman.

TI-PING TIEN-KWOH; The History of the Ti-Ping Revolution. By "Lin-Le." (Day & Son, Limited.)

IT is not our intention to endorse the opinions expressed by Mr. "Lin-Le" in his introduction to the above work, or enter on the subject of British policy in China, but we shall confine ourselves simply to the subject-matter it contains, as bearing on the "Celestial Empire," its inhabitants, and productions. We seldom meet with a mass of valuable and interesting information, coupled with so much stirring adventure and amusing traits of character, as in the work before us. Some of the river and marsh tracks described would prove hunting-grounds of irresistible attraction to the ornithologist, who would find an inexhaustible mine of wealth amongst the countless thousands of waterfowl and shore birds. Many of the battle-scenes and skirmishes between the rebels and Imperialists are most graphically described, and admirably portrayed in the accompanying illustrations. A fight on the Yang-tze river, as described by the author, so happily combines the picturesque with the warlike, that we give it in his own words:—

"Their plan of battle was well formed, and very picturesque in appearance; successive squadrons of gunboats would sail down and engage the fort, delivering their fire; and then, filling away before a fair wind, returning to their position up the river. These vessels were assisted by others co-operating from below the Ti-Ping lines; all being profusely decorated with gaudy flags, and propelled by numerous oars on either side.

"The whole scene of battle formed a never-to-be-forgotten spectacle. The gallant appearance of the innumerable gunboats tacking down stream, and opening fire, one after the other, in regular order; some crossing in every direction, and others running back dead before the wind, with their broad and prettily-cut lateen sails stretching out on either side, like a pair of snowy wings; the incessant roar of the cannonade, the flash of the guns, the curling smoke, at first dense and impenetrable, and then dissolving into thin wreaths, gracefully circling round the rigging and the white sails; the steady reply from the flag-covered forts, now enveloped in clouds of sulphurous vapour, anon standing forth clear and sharply defined against the dark back-ground formed by the waving bamboo; the peaceful current of the noble Yang-tze river—here narrowed to a point less than 1,800 yards across, though stretching far and wide immediately beyond on either side; the grim embattled walls of Nankin, towering over the plain a few miles distant; mountains of fantastic shape on every side, some near impending and majestic, others cloud-capped and dimly visible in the distance: the cheer and cry of battle mingling with the echo of artillery—all combined produced an effect truly grand and imposing."

Mr. "Lin-Le" appears to have enjoyed unusual opportunities for drawing, not only war-pictures, but for depicting scenes of every-day life in China; and that these opportunities have not been neglected, the work before us furnishes ample testimony.

OUR SOCIAL BEES. Second Series. By Andrew Wynter, M.D. (London: Hardwicke.)

UNDER this rather curious title, which may be taken to suggest that bees are usually unsocial, Dr. Wynter has republished a number of very readable papers, which he has, from time to time, contributed to magazine literature, and which relate to all manner of subjects, from "London Omnibuses" to "Lifeboats," from "Water Supply" to "Fire Insurances," from "Trichiniasis" to the "Thames Embankment." His first volume having been successful, he now issues the one before us, with, as far as we can judge, excellent prospect of its equally obtaining public approval. Although containing reprints only, the books will be new to many who take them up. It is not to be supposed that one can read every number of the numerous periodicals which the teeming British pen sends forth regularly every week; consequently, it must happen that many excellent articles would escape the notice of the public due to their merit, if they were not gathered together in such form as this, and republished. Many of Dr. Wynter's papers, in this volume, are highly interesting. They are put forth, not as exhaustive scientific treatises, but as chatty, general observations. They enter sufficiently into particulars to induce a desire for further inquiry, and this, at all events, must be esteemed as a healthy and worthy result. If we were disposed to carp at so genial a book, we might find fault with some of the names of the articles as being mystifying and far-fetched; but it has become a fashion—originated, we believe, by Mr. Dickens—to give these curious titles, which lead the unitiated astray, and to set up, as it were, any bush rather than the one which would notify the character of the entertainment provided. "'Tis affectations," as Sir Hugh Rose says. Who would guess that "Hedging against Fate" was intended to prepare the reader for an article on Insurance Companies; that "Buried History" headed a paper on "Uriconium," &c.; that "Human Wasters" meant idiots; and that "Distinguished Settlers from Abroad" referred to the collection in the Zoological Gardens?—who, but some clever student of Dickensian enigmas? We suppose, however, that conundrum-like titles, which may mean anything, do provoke curiosity; and thus, perchance, lead idle and careless persons into the way of acquiring information. Dr. Wynter is an agreeable writer of the light and airy school of essayists. He pretends not to profundity, but discourses in easy conversational style, requiring no labour of thought on the part of the reader. He tells us of a great deal which everybody knows well enough; and he, perhaps, thinks it advisable to disguise plain and accepted facts in new dresses, so as to give them an air of novelty. Who can quarrel with such an endeavour? Who would despise the *chef de cuisine's* assistance by means of which the monotonous mutton-chop is occasionally dished up *à la maître d'hôtel*? Certainly not this variety-loving generation, which will, no doubt, amply reward, by its patronage, such labours as those which Dr. Wynter so satisfactorily performs for them.

HARDWICKE'S CROWN PEERAGE, FOR 1866, by E. Walford, M.A., is a handsomely bound little volume, containing information, not only respecting the House of Lords, and the Scotch and Irish Peers, but the Baronetage and Knightage also. The title, "crown," given, we suppose to distinguish it from other publications of the same kind, represents its price. It is the cheapest and most compact book of the sort we have seen, and is, perhaps, as free from error as any work, containing such numerous particulars of hundreds of persons, can well be.

FISHING GOSSIP; OR, STRAY LEAVES FROM THE NOTE-BOOKS OF SEVERAL ANGLERS. Edited by H. Cholmondeley Pennell. (Edinburgh: Charles & Adam Black.)

THIS entertaining volume contains not only a great deal of very amusing "Fishing Gossip," but much that is highly interesting to the general observer of nature. The gentlemen from whose note-books these varied and graphic pen-and-pencil sketches have been gleaned are nearly all well-known "angler-naturalists." They have not contented themselves with a mere glance at the wonderful and deeply-interesting objects gathered and brought to light from the sea's depths, the river's bed, or amongst the green water-plants and tufted reeds; but have carefully investigated them, noted well their form and structure, and garnered up curious and agreeable fish-lore, for the benefit of all who love the gentle art. We, therefore, cordially recommend the book before us as being a highly-amusing and desirable drawing-room or seaside companion.

THE LEGEND OF THE MOUNT; or, the Days of Chivalry. By Alfred Elwes. (Effingham Wilson.)

THE author—or, as he modestly terms himself, the adapter of "Jaufry the Knight," a prose tale of the times

of King Arthur, which found no small favour some years since—has now published, under the above title, a composition which, in his own words, aims at being "both a prose tale and a poem." This may, at first sight, appear paradoxical, but is nevertheless true, as the following metrico-prosaic extract may show :—

"But 'twas not life inanimate alone which made this place so pleasant to the sense. Each verdant patch sustained the antlered deer; each velvet mead could boast its bleating flock; while birds of varied plumage twittered by, or carolled hymns of love and praise to heaven."

Mr. Elwes tells us that the legend was composed to illustrate some sketches of chivalric subjects, made by a Leyden professor, and it may be fairly said that he has imbued himself with an appropriate feeling, which is reflected upon his pages. Beautifully printed, and choicely got up, this elegant little experiment is at once a boudoir ornament, and, in its way, a literary curiosity.

MUSIC AT HOME AND ABROAD.

THERE can be no doubt that the appearance of Madame Maria Vilda, in the character of *Norma*, has been one of the principal events of this year's musical season. This lady is another proof of the truism embodied in the old proverb which informs us that "There is as good fish in the sea as e'er came out." When it was evident that the powers of certain once all-popular *prime donne* were on the wane, the croaking part of the community forthwith commenced their lamentations, coupled with prophecies that the glories of the lyric stage were departed for ever; and inquired piteously who would ever sing the "Casta Diva" like Signora So-and-So, or warble the part of *Zerlina* like Signora Somebody Else! Well, the question has already been answered very satisfactorily by Madlle. Adelina Patti, Madlle. Ilma de Murska, Madlle. Titiens, Madlle. Lucca, and a host of other ladies. Last in point of time, though not of talent, is Madame Maria Vilda, who is destined to fill a very eminent position in the operatic world. Indeed, she does so at the present moment. She sang, and found herself famous. It is long, very long, since such a voice has been revealed to the English public. The profound impression Madame Vilda created in *Norma* was increased by her impersonation of *Lucrezia Borgia*, in Donizetti's opera of that name.

Foreigners are very fond of saying that the English are not a musical nation. If such be the case, it must, at least, be admitted that we barbarous islanders adopt a strange method of showing our unmusical proclivities, for there is not a capital in the whole of Europe which can boast of such a galaxy of great singers and great players as London at this moment. Those same singers and players do not exert their talents for nothing. Their terms are high, and yet we English cheerfully pay them, because we are—not fond of music. It is true that a vast number of these artists are foreigners, but what of that? To say that an Englishman does not like music because the artists he patronises are not all native-born Britons would be about as absurd as to say he is not partial to his glass of port or sherry because those wines are not grown on the hills of Surrey or the downs of Sussex. The English nation not musical! Why, it would require a book almost as big as Kelly's London Directory to give anything like a complete list of the various musical performances, concerts, &c., which have taken place within the last month. We will not attempt the task. All we can do is to mention cursorily a few of the leading events.

At Her Majesty's, Gluck's *Iphigenia in Tauris* has been excellently received. It was most magnificently interpreted by Madlle. Titiens, Sig. Gardoni, M. Gassier, and by that prince among singers, Mr. Santley, a very creditable production, by the way, of "unmusical" England. Among the other operas performed have been *Les Huguenots*, *Dinorah*, *Don Giovanni*, *Il Flauto magico*, and *Oberon*—not a bad list. This theatre has received a great accession of strength in Sig. Mongini. Nor, while Mr. Mapleson has manifested such laudable activity in his managerial capacity, has Mr. Gye been content to slumber on his laurels. First and foremost, it was he who introduced Madame Maria Vilda to the London public. Then, among his company for the present season are Madlle. Adelina Patti and Madlle. Lucca, Signor Mario and Signor Ronconi. In his programmes have figured the *Africaine*, *La Sonnambula*, *Don Giovanni*, *Il Barbiere*, *Faust e Margherita*, *Lucia di Lammermoor*, *L'Elisir d'Amore*, and *Fra Diavolo*, besides *Norma* and *Lucrezia Borgia*, already mentioned. What a list of rare *chefs-d'œuvre!* To say a word of how they are all executed, both by singers and instrumentalists, at both theatres, would be superfluous. With regard to the instrumental portion more especially, are not Signors Costa and Arditi the conductors?

As for concerts, their number has been immense; yet, despite of this, all that were worth attending were numerously attended by the musical London public.

The threatening aspect of affairs at the present moment naturally engrosses the attention of the continental public to a great extent, and the attendance at the theatres is not what it generally is. Still, this state of things is, in all likelihood, only temporary; for, strange as it may appear, it is an undoubted fact, that never are theatres better filled than in times of war. Such has always been the case hitherto, and will probably be so for the future as well. We may, therefore, presume that the strains of Meyerbeer, Mozart, Mendelssohn, and a host of other great musicians of whom Germany has cause to be proud, will continue to delight the people of that country, even though their armies may be engaged in a suicidal conflict upon the field of battle.

In support of this opinion, we may mention the report concerning the young King of Bavaria. His majesty, as is generally known, has taken a great liking for the "Music of the Future," as it is termed, and especially for that of the great prophet of the future, Herr Richard Wagner. Last year his majesty had Herr R. Wagner's latest opera, *Tristan und Isolde*, got up in magnificent style, and produced "regardless of expense," to adopt a rather threadbare expression, at the Royal Opera House, Munich. This summer, war or no war, Herr Wagner's two operas—*Tannhäuser* and *Lohengrin*, placed on the stage with equal magnificence as the work first mentioned—are to be performed in their original and unabridged form. Herr A. Niemann who is expressly engaged to sing in them, is to receive one thousand florins every evening he appears. Whatever difference of opinion may exist about the young king's taste in art, there can be no doubt that his majesty is as "thorough" in his patronage of Herr Richard Wagner, as was the Earl of Strafford in his endeavours to substitute an absolute monarchy for whatever constitutional government England enjoyed in the seventeenth century.

But, as a rule, kings and princes abroad are more lavish in bestowing marks of approbation on, or extending substantial patronage to, musicians, than our sovereigns have been. It would take up a page or so of NATURE AND ART to give a complete, though merely nominal, list of all the composers, singers, and musicians honoured with crosses or orders in the course of a single twelvemonth, from one foreign potentate or another. Thus, for instance, some time since, the great pianist, Herr Joachim, in consequence of certain intrigues which were being carried on against him, threw up his post as *Concert meister* at the Court of Hanover. In a manner as honourable to himself as to the celebrated virtuoso, the King of Hanover appealed personally to him to resume his functions. Herr Joachim immediately responded to the appeal, refusing, at the same

time, a proffered augmentation of his salary. The king of Wurtemberg, also, has lately been playing the Mæcenas, like his two royal brethren. A new three-act opera, entitled *Astorga*, by Herr Abert, was successfully produced at the Theatre Royal, Stuttgart. The day after the first performance, the king sent for the composer, and, after conversing with him more than half an hour, and particularising those portions of the new work which more especially pleased him (the king), created Herr Abert Royal Musical Director; a dignity highly prized by the musicians of a country where the rage for titles pervades all classes.

In Vienna, *l'Africaine* has been continuing its triumphal career. There is no doubt that this last *chef-d'œuvre* of Meyerbeer, has been a greater success on the Continent than it has hitherto proved in England. Since first produced it has been played in Madrid, Milan, St. Petersburg, Parma, Bologna, Pesth, Berlin, Vienna, Hanover, Darmstadt, Coburg, Mannheim, Frankfort-on-the-Maine, Cologne, Nuremberg, Gotha, Leipsic, Wiemar, Schwerin, the Hague, Amsterdam, Brussels, Ghent, Brunswick, and a host of other places, too numerous to mention, besides finding its way across the Atlantic. But to return to music in Vienna: Bazin's comic opera, entitled in German, *Die Riese nach China*, has proved a hit. The public were surprised and pleased to find that it was more of an opera, and less a piece of mere buffoonery, than the productions to which they have been accustomed lately by composers of a certain school. Weber's *Preciosa* was performed, after having been a long time absent from the bills, for the benefit of the wounded and the invalid soldiers of the Austrian army. The performance attracted a house crowded in every part, and brought in the net sum of 3,500 florins. The leading artists of both Imperial Theatres lent their aid on the occasion, and some of the most celebrated names in the operatic annals of Vienna figured in the lists of mere chorus singers. A highly interesting performance also was given by the Italian company at the close of this season. In conformity with a practice becoming very prevalent of late, the entertainment, instead of consisting of one work, was a medley, made up of the fourth act of *l'Africaine*; the great quartett and trio from *l'Italiano in Algiere*; the second act of a very popular ballet, *Flick und Flock*; and the second act of *Il Barbiere*. M. Grisar's operatta, *Les Douze Innocentes*, re-christened, *Ein Dutzend Naturkinder*, has greatly pleased at the theatre Unter Wien. Herr Starbeck, who was recently appointed Imperial *Hof Kapell Meister*, has written a mass which is very much admired. A few weeks ago there was hardly a place of amusement where the braying of the brass military bands was not heard: at present, stringed instruments alone are the rule. The military bands have been ordered off on active service with their respective regiments.

In Berlin, there has not been any absolute novelty at the Royal Opera-house during the last month; but two or three celebrated works have been revived with good results. First on the list comes Weber's *Preciosa*. It is superfluous to say that the performance here was *not* for the benefit of the invalid and wounded soldiers of the Austrian army. It has been the fashion to laugh at the sentimental character of the book of *Preciosa*; but, notwithstanding, the piece when well performed, always finds admirers. In 1811, Pius Alexander Wolff adapted it, as a spoken play, from the Spanish tale of *La Gitanella*, by Cervantes. When first performed at Hamburg, it proved an utter failure. Count Von Brühl, Intendant of the Theatres Royal, Berlin, in 1820, liked it, however, and begged Weber—then engaged on his *Der Freischütz*—to illustrate the play musically. Weber at first hesitated, but eventually consented. It would be superfluous to enter now on a criticism of the music; but it is impossible not to be astonnded at the inventive power possessed by the composer, when we reflect how rapidly he wrote the eleven pieces, illustrating the text. He was, however, attracted by the difference between the two subjects, and by the opportunity of employing a treatment quite distinct from that of *Der Freischütz*, yet not less pleasing. On the 25th May, 1820, twelve days after *Der Freischütz* was finished, he commenced *Preciosa*. On the 15th July the work was completed. It was produced at Berlin, for the first time on the 15th March, 1821, some months before *Der Freischütz*. Weber's music soon found its way to people's hearts, and the dashing choruses, as well as the song, "Einsam Bin ich," are still almost as fresh and popular as ever throughout Germany. Another interesting revival has been that of Sophocles's *Antigone*, with Felix Mendelssohn's music. It is now more than twenty years since the music—written at the suggestion of the late Frederick Wilhelm IV. of Prussia—was first performed, under the personal direction of the gifted composer. It was revived in 1843. Since then, it has not been performed up to the present time. The management of the Royal Opera-house deserves the warmest thanks of all lovers of art for affording them an opportunity of enjoying the beauties of so grand a work, so grandly performed. By the way, those of our readers who have resided any time in the Prussian capital, may feel interested in learning that two very popular (though not, perhaps, first-class) fair artistes, Fraülein Leontine Garicke, and Fraülein Santer, have left the Royal Opera-house, each on the occasion of her marriage. The former lady, who has married a Berlin tradesman, retires altogether into private life; the latter, now Madame Blume Santer, transfers her services to the Theatre Royal, Dresden.

There is not much to record concerning the other Berlin theatres. At the theatre of the Friedrick Wilhelmstadt, the principal attraction has been a version of *Jeanne qui pleure et Jean qui rit*, of which a version is now being played at the Adelphi, under the title of *Crying Jenny and laughing Johnny*. In the German playbills it figures as *Die Hanni Weint, der Hansi Lacht*.——The summer season at Kroll's well-known theatre has begun, and is now in full swing, opera being the staple amusement. The gardens belonging to the establishment have been much beautified, the system of illumination being truly magnificent. The *al fresco* orchestra is under the personal direction of Herr Engel, the enterprising manager himself.

Fraülein Cornelia Meyerbeer, the youngest daughter of the great composer, is shortly to be married to Herr Gustav Richter, a professor at the School of Fine Arts, Berlin.——Professor A. B. Marx is dead. He was the author of several works, among which, that entitled the *Musikleure* was the best known, perhaps, in this country. He composed, also, an oratorio, entitled *Mose*, which, though containing some few good points, was a comparative failure. In private life, Professor Marx was highly esteemed as a straightforward, honourable gentleman.——A letter has appeared in several of the German papers, concerning a curious relic. The writer, S. Gyutai, states that Beethoven's piano is at present in Klausenberg, Transylvania. It is about seventy years old, we are informed. The soundiug board is ornamented with the composer's coat of arms, and with his portraits, taken when he was young and easily recognisable. The name "Louis Beethoven," wreathed round it, leads Herr Gyulai to suppose that the instrument was manufactured by J. A. Vogel—who then resided at Perth—either as a present to Beethoven, or by his order. According to the statement of persons still living in Vienna, it was bequeathed by Beethoven as a memento to one of his pupils, who subsequently became a music-master in Hungary, and taught Madlle. Elise Kallais. This lady married the poet Joysika Miklos. She received the piano from her master, as a mark of his gratitude. After remaining in her possession, and being used by her for many years, it passed into the hands of the Daniel family, at Dees. Thence it went to Pitaky Mihaly, at Klausenberg, and thenco to Herr A. Konez, a merchant there. Its present possessor is Herr S. Gyulai, from whom the above statement emanates, and who declares his readiness to leave the piano, as a relic of the immortal master, to any public collection or museum; but, whether as a gift, or for a "consideration," we cannot say. Should any *fanatico per la musica* desire further particulars, he may obtain them by writing to "Samuel Gyulai, Belsas Farkas, Utsza, No. 8, Klansenberg, Transylvania."

In Paris, the Italian operatic season has been brought to a close without the production of Verdi's much-talked-of *Simon Boccanegra*. On the whole the present management has hitherto proved unsatisfactory in an eminent degree;

the performanees were tame and insipid, and Madlle. Adelina Patti alone kept the theatre open. Nevertheless, M. Bagier possesses such influential patrons, that he has again obtained an imperial grant of money. At the Opéra-Comique, Herr von Flotow's new opera (words by M. St. Georges) entitled *Zilda*, has been suceessfully produeed. The plot is laid in the time of the Caliph, Haroun al Raschid, that is in the time of the *Thousand and One Nights*. The musie is pleasing, and contains several very effective pieees. The prineipal part is eonfided to Madame Marie Cabel, who is excellent in it, both as a voealist and an actress. A two-aet opera, by M. Gounod, will shortly be produced at the same establishment. It is called *La Colombe*, and has already been performed at Baden-Baden, with Madame Miolan Carvallo, and M. Roger, as its prineipal interpreters. A third novelty at this theatre will be the *Salteador* of M. Jules Cohen, a talented young composer, who is professor in the Conservatory of music, so that there is no dearth of novelties. In addition to the foregoing, moreover, the management of the Théâtre-Lyrique, has accepted one in three aets, and bound itself to bring it out before next February. The musie is by M. Victor Joncieres, and the book by M. Becque. Its title is *Sardanapale*. Another opera of the same name is being eomposed by a great lady, the Baroness de Maistre, for the Grand Opera, the manager of which, M. Perrin, *is said* to have diseovered a new operatic genius, in the person of a M. Duprat, who, in his turn, *is said* to have written an opera called *Petrarca*. This, also, *is said* to contain numerous beauties of a high order. M. Ambroise Thomas is working on an opera, entitled *Mignon*; and M. Offenbach on one named *Haroun al Raschid*.

M. Gounod has been elected a member of the Académie des Beaux Arts, in the plaee of the late Louis Clapisson. Thirty-six members voted; nineteen for M. Gounod and sixteen for M. Félicien David, the rival candidate.

One of the greatest musical lions of the season has been a M. Bonnay, a young Frenehman, who plays upon an instrument ealled the "Xylophon," *Anglicé*, an instrument made of wood and straw, with whieh he has excited the wonder of the fashionable public.

All who have heard *Les Huguenots*—and what lover of musie has not done so?—agree in pronouneing the grand duet in the fourth act, between Raoul and Valentine, as one of the most brilliant gems in this *chef d'œuvre*, which eontains so many. While, too, the eomposer has been praised for what *he* has done, there had been no want of laudation heaped upon M. Scribe, for *his* share in the work. With an amount of modesty that is quite charming, M. Scribe allowed the publie and the eritics to go into ecstacies about his great merit, in having furnished the eomposer with sueh a situation, and sueh words, as a basis on which to build up the fabric of his musie, for—as far as we know—the popular author never let drop a hint that the encomiums thus lavished on him were not his due. Yet such was the ease. M. Scribe did *not* write a word of the duet. For a long time there was a report current that Meyerbeer composed the duet at the suggestion of the famous tenor, Nourrit. Scribe had made the grand scene of the oath the principal feature of the act, but Nourrit thought it strange that he, the hero of the opera, should have to appear only onee, hide himself immediately afterwards, then rush out of his retreat, run off, and not be seen again till the next act. Rather than submit to this, he preferred not eoming on at all. This version of the matter, especially sinee Berlioz gave it in his *Soirées de l'Orchestre*, was accepted as eorrect. On the one hand, people were wrapt in admiration of the genius of the composer who eould extemporize, as it were, so magnifieent a produetion as the duet in question; on the other, they were never tired of expatiating upon his good fortune, in having been incited to the task by the eaprice or ambition of a tenor. Recent investigations have, however, demonstrated that the idea of the duet existed in M. Scribe's sketch of the plot, and that it was actually earried out by him, but that Meyerbeer, who had been delighted with the notion, was far from satisfied with the exeeution of it. In this dilemma, as M. Scribe had gone on a trip to the Pyrenees, Meyerbeer applied to M. Emile Deschamps, with whom he was on intimate terms, and, after showing him M. Mérimée's "1572," from whieh the idea of *Les Huguenots* was taken, requested him to write a new duet. M. Emile Deschamps consented to do what he could, and wrote the duet now sung.

But M. Emile Deschamps did more than this. He wrote the air of the Page, at the end of the first act; the romanee of Valentine, at the commencement of the fourth; the grand air of Raoul, in the ball-seene; the *scène d'entrée* of Mareel, in the first act; the famous "Piff-Paff" song; and the trio in the last aet. For this large amount of work, M. Emile Deschamps still receives a royalty upon every performanee of *Les Huguenots*, but that royalty is taken from M. Meyerbeer's share, and not from M. Scribe's, because the alterations in, and additious to, the book were made solely at the wish of the composer, without consultiug his first literary *collaborateur*.

At St. Petersburg, the musieal season is over, and a very bad one it has proved for most of the foreign artists who have visited the Russian capital. A great many scareely earned sufficient to defray their travelling expenses. Russia is no longer the Tom Tiddler's ground it onee was, where musicians had only to appear in order to commenee at once the agreeable task of picking up gold and silver. The railways have overstocked the musical market, and travelling virtuosoes are at a heavy discount. For some considerable time, some extraordinary attraction has been needed to attract the publie to a coneert given by a foreign artist. Perhaps Madame Clara Sehumann is the only person who of late years has given a *series* of concerts that were really well attended, and the fact of their being so was attributable more to the popularity of her late husband's compositions than to her own merit, great though that be. Unless possessed of the very highest talent, or holding letters of introduetion from most influential patrons, foreign artists would do well not to visit Russia with the idea of reaping a good rouble harvest, except they have in their pockets an engagement, duly signed and sealed, before they start.

THE OLD MASTERS AT THE BRITISH INSTITUTION.

THE public—*si sua bona nôrint*—are really much indebted to those kindly—if, indeed, we may not say patriotie—colleetors who, year after year, denude their walls of heir-looms and household gods, to furnish forth the interesting exhibitions in Pall Mall. Here, in modest space and among sober canvasses, the dazzled eye and erowd-tossed frame that have borne the burthen and heat of a day among the modern painters, may enjoy a repose at once grateful and instruetive. The Gallery is perhaps more than usually attractive this year, in consequenee of the number of works by Sir Joshua Reynolds eontributed by several families of distinetion; and all must rejoice that Lord Crewe was so fortunate as to save his priceless Sir Joshuas from the flames that stripped his noble hall of so many objects of antiquarian interest. A portrait of fair and frail Kitty Fisher; one of Master Crewe, posed and dressed as the Bluff King; another of a Mrs. Crewe, as a shepherdess; and yet another of two Misses Crewe, have been pronounced by the world of eonnoisseurship to be the finest examples sent by his lordship. The Mrs. Fisher has, it is true, yielded her complexion to time, and is of a melaneholy greenish hue; but the graee and beauty of both the subject and the painting have been, so far, proof against the attacks of the destroyer. Mrs. Crewe's portrait, a full-length, is a splendid

specimen of the inspiration Sir Joshua would seem to have drawn from the contemplation of well-born loveliness; and the boy's picture, while rich in every other quality, displays infinitely more *nerve* than any of the great president's works we can call to mind.

There are a number of Sir Joshua's family portraits—none of them unworthy of veneration and study—contributed from the Fane, Westmoreland, and Beaufort collections. The most imposing is the composition, or "assembly," as it was termed at the period, introducing Mr. Henry Fane, Mr. Inigo Jones, and Mr. Charles Blair—the two latter gentlemen guardians of the former—enjoying their wine *al fresco*. Here the hand of time has so regrettably injured parts of the work, that we find an additional reason for congratulating our Academicians of to-day on their decision—if decision may be inferred from their published suggestion—to take formally in hand the chemistry of pigments.

Our reverence for our own great portrait-painter must not rob us of the pleasure of suggesting that an hour or two may be worthily spent among the Flemish masters in the North Room. Here we have a good specimen (an interior composition) of the three hundred known works of the serio-comic Jan Steen; and a splendid one of Gerard Dow's power over texture and still life, linked to a meaningless attitude of an insipid subject. In the "Wine-taster" of Mieris, a cabinet work in his own exquisite style, we seem to find the type of one of the modern German Hasenclever's famous group. There is a good "Baggage Train" by Wouvermans; a noble landscape, a grim and gloomy wooded gorge, by the monarch of Dutch landscape painters, Ruisdael. A yet more imposing marine piece, by the same great hand, is the "Harbour-mouth, with Vessels making for Shelter." The passionate, chequered breakers, perturbed sky, and terror-stricken ships, are all in actual movement, and the crisis of the storm is so imminent that the spectator seems to await it with a sensation of anxiety.

The Duke of Devonshire's rustic mill embosomed in noble foliage, an ample landscape to the right, and a solidly-painted foreground, is in that manner of Ruisdael which has had such an influence upon English landscape art. The "Head of an Old Man," by Deuner, although a Chinese copy of a beard of two days' growth may not be charming, is worth attention for its admirable rendering of the hair and complexion. A Masaccio portrait (said to be an Aldobrandini), lent by Lord Overstone, presents a figure of imposing gravity and force of tone; and Jan de Mabuse is represented by "A Merchant," clearly a portrait, wonderfully executed and full of expression, albeit this is curiously associated with a face and brow of marble smoothness, exceeding in its delicacy the dreams of a Rachel, and unruffled by a line of thought or faint suspicion of a wrinkle. The power the portrait has is, of course, the more singular on this account; and, in a somewhat less degree, the same remark may apply to the Aldobrandini picture. The downward flight of a full-robed angel, by Masaccio (belonging to Lord Somers), is very excellently represented; but one foot seems unfortunately out of drawing. In the same corner is a magnificent Canalletto "View in Rome"—an exhibition by itself. In the Middle Room a remarkable portrait by an artist named Lütlühuys must arrest every spectator's attention, and is worthy of study: and those who associate the name of George Morland with not unrepulsive pigstyes and *villeinage* only, will do well to pause before his minutely-finished and very pleasing *morceau*, "Girl caressing a Dove."

Large as is the force and number of the foreign masters in this year's exhibition, England need not blush for her own sons, who not unworthily represent her. The purity of Crome's air, the lightness of his clouds, his mastery over the sombre and the luminous, is displayed in several of his works lent by Mr. Fuller Maitland and Mr. Wynn Ellis, which may stand at no disadvantage side by side with those qualities of the ancients. Dyce's "Virgin and Child," painted almost in our own day, is a splendid example of colour and flesh-painting, with perhaps a thought too much nerve in the holy infant's plumpness of muscle. We might ramble on, however, beyond the limit of our readers' patience were we to catalogue even all the beauties—without glancing at defects—in these rooms; so, praying the attention of all for whom infancy has a charm to Sir Joshua Reynolds's exquisite child-portraits (162 and 110)—to all mothers *the* gems of the exhibition—we must quit this pleasant place and interesting subject.

NOTES ON FANS.

WE are glad to offer to our fair readers a chromo-lithograph and description (kindly placed at our service by Mr. W. J. Thomas, of 136, Oxford Street, one of the leading court jewellers in Europe), of a fan presented by the Princess Marie, Duchess of Hamilton, to Her Royal Highness the Princess Mary on the occasion of her marriage. The sides are of pierced gold arabesque work, enriched with H. R. Highness's monograms and crown in diamonds, rubies, and emeralds. The meshes are of fine carved mother-of-pearl, richly inlaid with wreaths of flowers in pure gold; the monogram and coronet carved on the centre one. The body is of the finest Brussels lace expressly designed, and the workmanship, as well as the lace of the (unjewelled) *fac simile* now before us, is truly exquisite. To these particulars we take the opportunity of adding a little fan-gossip, which we hope may not prove uninteresting. To begin in the true encyclopædical style—though, by the way, as will be found on reference, the subject has not been found worth the attention of the encyclopædists—we have collected the following etymology of the word from the best authorities.

FAN. Anglo-Saxon, *Fann*; German and Dutch, *Wanne*; Italian, *Vanno*; French, *Eventail*; Spanish, *Abanico*; Latin, *Vannus*, derived (says one) from the Greek *βαλλειν*, meaning to "winnow, cast, or throw lightly into air."*

Certainly *our* Fan was never invented in a cold country. It must have been born with the sun, and have travelled westward. It has been copied from Egyptian tombs and temples, by Mr. Owen Jones, into his beautiful "Grammar of Ornament." (Chap. III. Plate 5. Figs. 1, 4, 5, and 6.) It has turned up recently in Assyrian investigations. It may be tracked through all the painted records of Hindostan and Persia. China and Japan are full of it. Its most monstrous forms (if we except the huge steam screw-blades, now technically called fans) are the Indian Punkah, and the leaves of the Ceylon Palm, a *Borassus Flabelliformis* This precious tree, on which Sir Emerson Tennent thinks fully one-fourth of the population of the northern division of that island depend for sustenance, provides them with food, oil, wine, sugar, building-poles, roofs, fences, baskets, mats, books, and lastly FANS. But not from the East did the fan of society reach Britain. We owe it—according to the bulk of authority—to France. Steevens places its arrival in the reign of Henry VIII. Stow says that masks, muffs, fans, and false hair for women, were devised in Italy, and brought to England from France in 1572. That being the year of the Hugueuot massacre, and of the supremacy in France of Catherine de Medici and her Italian following, it is, perhaps, not very odd that Stow should have fixed upon it for the invasion of England, by what he would have termed a pestilence of their Italian novelties. Once planted, the exotic throve apace, for in "Love's Labour Lost," written about 1594, we find Don Armado, "a fantastical Spaniard," rallied for taking upon himself the office of a

* A very rare—perhaps unique—book exists in the Archieopiscopal library at Lambeth, dated 1578, and called "The Fanne of the Faithful."

lady's fan-bearer. In "Romeo and Juliet," the nurse calls to an attendant, Peter, for her fan; and this may be taken as a satirical allusion to the frivolity of an upper class, or to a deep-seated "fan-mania" pervading all society. When Queen Bess died, her wardrobe was found to contain twenty-seven fans. One of her Majesty's fans, we are told by Mrs. Stone, in her "Chronicles of Fashion," was valued at £400. Another, given to her by Sir Francis Drake, was white and red, with a gold, and jewelled handle. Even the young gallants of the time bore fans—if we may credit Greene's "Farewell to Folly," written in 1617. In an interesting work, called "Toilette in England, by a Lady of Rank," we find a representation of feather-fans of the Elizabethan age, bearing much resemblance to the hand fire-screens of our own time. In Mr. Fairholt's "Costume in England," we find numerous varieties. Several of them—an Italian one especially, shaped like a key—are of very quaint forms indeed.

In a MS., by Aubrey, "On the State of Manners in England" (dated 1671), is the following curious passage, bringing our fanology down to the reign of James I.:—

"The gentlemen then had prodigious fans, with which their daughters oftentimes were corrected; Sir Edward Coke, Lord Chief Justice, rode a circuit with such a fan. Sir William Dugdale told me he was an eye-witness of it."

No. 103 of the *Spectator*, signed by Addison, consists of a most amusing "letter to the Editor," as we should say now-a-days, upon "The exercise of the fan." "Women," says the supposed correspondent, "are armed with fans, as men with swords, and sometimes do more with them." "To the end, therefore, that ladies may be entire mistresses of the weapon which they bear, I have erected an academy for the training up of young women in the exercise of the fan, according to the most fashionable airs and notions that are now practised at Court." Having set out a scheme of fan-drill and evolutions, the author dilates upon their philosophy and poetry, most amusingly. He attaches most importance to "the flutter," which "masterpiece of the exercise may be learnt," he says, "in three months;" and he believes that by attention and observation, a "woman of tolerable genius, who will apply herself diligently for one half-year, shall be able to give her fan all the graces that can possibly enter into that little modish machine."

The fan, too, like the garter, has been the base of an order of chivalry. Louisa Ulrica, Queen of Sweden, instituted in 1744, the Order of the Fan for the ladies of her court; and gentlemen were afterwards allowed to join it. Fan-making must have been a brisk business in England some years earlier; for we find that the Worshipful Company of Fan-makers of London, the eighty-fourth in order of precedence of the Civic guilds, was incorporated in 1709; and was well enough reputed to attract to its fellowship good men and true from outside the City walls. With the foundation of the Fan-makers' Company ends the archæology of the English fan, which thenceforward became part and parcel of our everyday life.

For just a century after Addison wrote, the fan figured prominently in polite society, matched, when the sword went out of fashion, against the snuff-box and the clouded cane, and often victorious. The satirists and dramatists were in turn bitter and pleasant in their references to it. Painters and their sitters paraded it ostentatiously. It is said to have done wonders in diplomacy, and who could wonder at the success of flying sap and masked battery against garrisons defended by an eye-glass, a pinch of snuff, and a malacca. The fan's apogee was in the days of the *minuet de la cour*. But since athletic waltzes, polkas, and mazurkas have elbowed out their courtly predecessors, the once "modish little machine" has retired into obscurity with the "wall-flowers," or, if at all, is used by the dancers as inartistically as though it were the archetypal "vanne" or wind engine. Brighter days may, however, dawn, and society which, in its way back to costumes of the Watteau and Pastoral periods, has already reached the stage of short waists and long trains, may even in our time reclaim the little exile from its temporary partial shade. We have not time to trace or follow its career in other lands. Though many may perhaps wish we had illustrated its best-known, or Spanish variety, we must needs leave that field for some more erudite students of costume, and conclude by devoutly rejoicing that, in the ordinary fan of the present day Art has not strayed far from Nature. To NATURE we owe the Palmyra, the Borassus, and the Talipat; to ART, the beautiful productions of which our illustration depicts an example.

THE ACADEMY, THE CHIEF COMMISSIONER, AND THE NATIONAL GALLERY.

SINCE the accession of the new president, the Royal Academy have taken a step which will be most acceptable to the public. They have submitted to Her Majesty's Government twelve proposals for reform, several of which are worth quoting. They are prepared to throw open their doors to an indefinite number of Associates, who may vote at elections of Academicians, and they will repeal the obnoxious rule which has heretofore demanded that every candidate for admission into their ranks should cease to belong to any other artistic body. Academicians are to be elected for merit only, and not for length of days, from among the associates; and the opening of the Schools the whole year round will be entertained. But it is to be regretted that the body cannot be reconciled to the idea of extending the number of full Academicians beyond the forty-two of the existing Charter. They have decided, it appears, that, if Governmental pressure forces them to give more seats to professors of sculpture and architecture than the six and four now allotted to those arts, it will be better to reduce the number of painter-Academicians than to raise the total number. If this view be accepted by the Crown, we should urge a stipulation on the part of Government—while the Crown is yet in the position to make stipulations—that some provision should at least be made for passing the fathers of the Academy on to a retired list, and thus securing vacancies by some less sad agency than the hand of death. If the judge, once appointed, must be always a judge, it certainly does not follow that the painter will be always a painter. For, if so, our Associates may be always Associates, pining outside the delectable gate for the places of men whose hand may have long since lost its cunning. The provision that members need not hereafter abandon other schools or societies is a very proper concession to a long-expressed public opinion. It is time that the old exclusiveness that has kept outside such men as Hurlstone and Pyne was abandoned, and the new President, if to him the move in the right direction be due, is to be congratulated upon it. The offer of the Academy to establish a laboratory for chemically testing colours and vehicles is another sign of enlightenment which, in view of the deplorable state of many of the public pictures through neglect of chemistry, cannot be passed without a word of encouragement.

In the course of the debates upon supply a few weeks ago, Mr. Cowper announced, to the satisfaction of the architectural profession, that the number of architects to compete for the building of the new Palace of Justice had been enlarged from six to twelve, and that as many were to compete for the new National Gallery proposed to be built in Trafalgar Square. For this latter work, or rather for a portion of its site, £45,000 were voted, and £20,000 were taken (on account of £65,000) for an Examination Hall to be built for the London University on a portion of Burlington

Gardens. When the Ministry proposed that the Royal Academy, driven at last from Trafalgar Square in obedience to the will of the large party who claim that site for a National Gallery, should find rest on the Burlington estate, and that they should be allowed to have a design of their own, so it were in keeping with the works projected by the Government, they reckoned, it seems, without their host, or let us say their invited guest. It was not fated that the ancient "triangular duel" between the Dilettanti, the Academy, and "the Department," should be thus arranged.

Mr. Beresford Hope, speaking no doubt upon information, re-opened the ball on the 8th ultimo by asking "Whether, in the event of the negotiations between the Academy and the State for a site at Burlington House being broken off, some guarantee would not be given that the house in question should not be demolished?" This led to an admission that the Academy had—though not yet officially—altered their minds, and were going to accept three acres offered to them at Brompton by that eternal and irrepressible body, the Commissioners of 1851, or, as they might fitly be designated, the Commissioners of South Kensington. Happy academicians, happy commission, happy Mr. Cowper, say we, if the ghost of this long-vexed question can thus at last be laid. For, as was well observed, the Academy enjoy no grant of public funds, and may spend their own as they like. The mission of the much-abused men of 1851 is to cover the land at South Kensington, and the sooner that mission is ended the sooner will public heart-burning cease. The course of the good-tempered Minister of Works in this matter has been prescribed for him long ago by Dogberry. "If a man will not stand—why then, take no note of him, but let him go; and presently call the rest of the watch together and thank God you are rid of him." But, alas! his repose will be but transitory. For, if he be really rid of the academicians and their tenant-right question, the men of taste will yet live to worry him in the names of art, antiquity, and associations; and the utilitarians, in the names of common sense, convenience, and economy about the disposal of the sites at Trafalgar Square and Piccadilly. One honourable member seemed to consider the memory of the former occupants of Burlington House quite sufficient reason for letting their old house alone. Others thought it ought to be preserved and somehow incorporated with a very large building. Lord Elcho and Mr. Ayrton very sensibly thought, if it really was such an ornament to London the walls around it might be removed. All spoke in the usual high terms of Trafalgar Square and most contemptuously of the building there. A minister was absurd enough to evoke the Duke of Wellington in support of an apocryphal *dictum* that a National Gallery should, for military reasons, not be near a barrack. Lord Cranborne took occasion to censure what he termed the "peculiar spirit of self-assertion, self-aggrandisement, and intrigue which appeared so strongly to animate the staff at South Kensington." Mr. Hubbard thought South Kensington the very place of all others for all exhibitions, and Mr. Cowper, the best of landscape gardeners. The speakers in this long debate were not numerous; each agreed to differ *toto cœlo* from his neighbour; and no conclusion was arrived at. A few mornings after, Sir Edwin Landseer stepped into the arena, informing the public through the *Times* that he, at least, was no consenting party to the movement of the Academy to Brompton. He took for granted, necessarily to his own argument, but on entirely insufficient grounds, that the Academy would have pleased no one by building in Piccadilly, and thus having cleared away a disturbing element from the calculation, argued on the respective merits of Trafalgar Square and Kensington, as follows:—

"To a suitable site for the collections belonging to the nation there are some things indispensable. It should provide, in an equal degree, for the exhibition of them in an accessible way, for the careful preservation of them, and for large and frequent additions to them. Trafalgar Square has the accessibility, and nothing else. When the question was first mooted seriously sixteen years ago, a committee of the House of Commons—of which Lord John Russell, Sir Robert Peel, Lord Seymour, Sidney Herbert, and Mr. Disraeli were members—examined a great many witnesses, and reported their evidence to be only short of unanimous against Trafalgar Square as unfavourable for the preservation of pictures. They condemned as useless any expenditure for increasing the accommodation on that site; pointed out the extent to which its many disadvantages had already checked the liberality in gifts and bequests it was the nation's interest to have encouraged; and laid it down as essential, in building for the national collections, that three incidents inseparable from a crowded London thoroughfare should be avoided—excessive smoke and dust, obstructions to light and air, and impossibility of enlargement whenever necessary.

"On the other hand, the more dispassionately the matter is considered, the plainer it will be that it is for the interest of all, and especially for the public interest, that the Royal Academy should remain in Trafalgar Square. No other purpose could be named for which that site is so well adapted as for the three months' exhibition and the public schools of the Academy. With proper management I believe the space would be sufficient for both; there would no longer be a necessity to close its schools while its exhibition was open; its galleries would be large enough for the acceptance of every picture deserving of exhibition; and, by its money saved in building, every advantage it has given to students might be enlarged, every charitable provision it has made might be rendered more worthy, and, appropriating all its income to the promotion and encouragement of the arts, it might in future far more than repay by the extent of its public service whatever public advantage it now receives. A sufficient guarantee is afforded by its past history for what its future career in such circumstances would be."

Every one is not bound to approve Sir Edwin's confident perorations; but his communication to the literature of this ancient and most pretty quarrel is a valuable one, and carried weight enough at the time to be cited in the House as a reason, among others, for postponing the third reading of the Bill.

FINE ART AUCTIONS.

As usual at this season several very valuable galleries of paintings and drawings have been disposed of by Messrs. Christie, Manson, & Woods, who may be termed the Clotho and Atropos of fine-art collections. Those of Moore, Macqueen, & Co., realized together £17,250. Mr. Moreland's small gallery, in which were high-class specimens of Canaletti, Claude, the Vanderveldes, and a very fine Cuyp, produced about £8,000. The important collection of Mr. George Young comprised examples of Calcott, F. Goodall, T. Webster, P. Nasmyth, Fleury, Creswick, Roberts, T. S. Cooper, Wilkie, Collins, Etty, Stanfield, Constable, and Turner. The "Haywain," by Constable, brought 1,300 guineas; and the "Seventh Plague of Egypt," formerly in Beckford's collection, 1,010 guineas. Again, the final portion of Mr. Flatow's stock-in-trade was sold for £8,585 (the first part having brought £24,750). It comprised a landscape by Sir A. Calcott at 1,000 guineas, and a Sydney Cooper at 500 guineas. Week after week, in fact, during the season, an ebb and flow of fine-art treasures may be noted with interest at the famous rooms in King Street; and the same thing is, of course, going on at Paris. The competition in the gay city for high-class works is, apparently, more intense than here. The collections of the Comte de Choiseul, Mons. Meyer, and others recently sold have produced large sums. The "Phryne," for instance, now a conspicuous ornament of Mr. Gambart's

gallery in Pall Mall, was bought by an intermediate owner at the Meyer sale for £1,180.

The sale of the Pourtales gallery, and, in a minor degree, that of the late Duc de Morny's collection, were events that brought half the connoisseur world to Paris, and the prices surprised everybody. The late retrospective exhibition in the Champs Élysées showed the extent to which the love and the *vogue* for objects of art and curiosity are now cultivated in France. Such a collection of enamels, old faïences, china, carving, and curiosities, was rarely ever seen under one roof. One of the most remarkable contributions to that exhibition—the museum of the well-known virtuoso, M. Carpentier, recently deceased—was offered to the public in June. It contained sixteen hundred objects of the richest and most varied quality.

Truly we cannot refrain from observing that the fine-art buyers, at least, have escaped the "panic" of the day. An eminent contemporary, moralizing on this theme, draws the conclusion that the class concerned in the ups and downs of the East-end, and in the treasures of King Street, are widely different. Commerce and finance, he thinks, have a world of their own; and while some deal with their money, others—meaning the fine-art buyers—have no more conception of the fluctuation of money than Arcadians, and buy pictures, jewels, and blood-stock, without any notion of investment. Such, however, happens not to be the case. Mark a catalogue at King Street, and where you can get the name of a principal you will find that the amateur of diamonds and sapphires is a "Mincing-lane man," who has the bank rate at his finger-ends; the buyer of lacquer, jade, Cellini cups, and the like, is a prosperous money-jobber and citizen spectacle-maker. Crœsus, of Lombard Street and the lanes adjacent, has never finished stocking his westward palace with objects of art; while Dives, of Moorgate Street, has nothing left to sigh for but more wall space for his pictures. It would be an evil day for the painters of England in which the magnates of Lancashire and Yorkshire—the men of the mill, the mine, and the forge—ceased to vie with each other for specimens of Müller, Constable, Turner, Stanfield, Creswick, and Ansdell; and successful traders of London to invest in pictures and precious ornaments, as deliberately, perhaps as profitably, and quite as agreeably as they could in houses or Consols.

OLLA PODRIDA.

A LARGE PICTURE of the Rocky Mountains painted by Mr. Bierstadt, an American artist, is now on view at Mr. McLean's gallery in the Haymarket. It is long since we have had an opportunity of inspecting a work of art so grand, and yet so truthful in detail. The huge riven peaks shooting up, snow-capped, 10,000 feet above the sea's level, their sides furrowed by glaciers, and the chasms amongst their giant crags pouring forth streams of crystal water, stand towering imposingly before us. The lights and shadows are so admirably disposed, that it is hard to divest the mind of the reality of the scene, or avoid entertaining ardent wishes for a rod and line with which to levy tribute on the speckled trout that our imagination pictures eagerly waiting the gaudy, treacherous fly in the depths of that noble pool below the cataract. The camp of the Shoshone Indians beneath the grove of cotton-wood trees, is replete with rich colouring and picturesque effect. In fact, the quiet, peaceful valley amongst the mountains will long live in our memory almost as though it had been one of our own camping-grounds, when, like the artist, we worshipped at the shrine of Nature amongst her most majestic temples.

On the 12th of May a large and distinguished party, several hundred in number, was entertained at Willis's Rooms by Sir Roderick Murchison, President of the Royal Geographical Society. The treasure-stores of travellers in every quarter of the world seem to have been laid under contribution to delight the assembled geographers and their friends. Conspicuous among the objects was the collection of Mr. Consul Baker, the Nile traveller, and that of Commander Forbes, from Japan. The former comprised a specimen of indigenous cotton from the equatorial region, seemingly, at least to unpractised eyes, full of promise. The latter, rich in curiosities of the description now familiar to most of us, was remarkable for a rope described as "a junk's cable of ladies' hair!" Our valued contributor, Mr. Baines, exhibited his drawings made in Australia and Central Africa; and an attractive feature of the multifarious exhibition was a Chinese work illustrated by native artists. Not only the Geographical Society and the scientific world, but we may even venture to add that civilization itself, is indebted to the liberality that organizes these monster gatherings.

At the Annual Meeting of the same Society a purse of 100 guineas was presented to M. Du Chaillu, to re-imburse him for the loss of his instruments in Western Africa; thus affirming satisfactorily the value placed by a competent tribunal on the labours of a traveller whose inferences and even veracity have been strongly impugned by captious and ungenerous critics. It was announced, too, that Mr. Whymper, of Alpine renown, purposed to trace by land the extent of Greenland to the north, conceiving, from the number of deer that find their way to its ice-bound coast, that there may be pasture-grounds beyond.

A Variety of Indian Corn known as Caragua maize has lately been cultivated in the South of France; it is said to attain a height of from ten to twelve feet, and to give nearly twice as much grain as the ordinary kinds and sixty per cent. more forage. It is not stated whether it requires a hot climate, but, from the fact of its cultivation being commenced in the South of France, this is most probably the case.

Apropos of Arctic discovery, we extract the following remarkable passage from the corner of our daily contemporary, the *Standard*, in which, considering its startling nature, it was somewhat unaccountably buried:—"Two French gentlemen recently explored the island of Spitzbergen in a manner never before done. They have measured the mountains, mapped the whole coast, examined the vegetable products, the geological composition, &c., of the island. They found that the long day, extending over several months, during which the sun never sets, became intensely hot after a month or two by the unceasing heat from the sun. In this period vegetation springs up in great luxuriance and abundance. The North Pole is only a matter of 600 miles from the island, and it is thought by the two explorers, as by many others, that the Pole itself and the sea which is supposed to surround it could be reached from Spitzbergen without any great difficulties being encountered. A singular fact noticed by the explorers in connection with this island is the enormous quantities of floating timber which literally cover the waters of the bays and creeks. A careful examination of the character, condition, and kind of those floating logs would no doubt lead to a conclusion as to whence and how they came, and probably suggest new theories for the solution of geographical problems connected with the Arctic Seas." We shall certainly look with interest for further detail in this matter.

In the North of France, salt, we hear, has been found of great value in renovating asparagus beds that have ceased to be productive. The salt is applied in the proportion of about 12 lbs. of the grey common salt of the country to each yard of bed, six feet wide; or, in other words, six pounds of salt to the square yard. Treated in this way, says a French gardener, old beds yield crops twice as large as could be expected from young plants in full bearing. The middle of March is said to be the best time to apply the salt, which is merely sprinkled on the surface.

NATURE AND ART

ANCIENT GREEK AND ROMAN FIELD SPORTS.

By the Rev. W. Houghton, M.A., F.L.S.

II.—STAG HUNTING IN THE TIME OF XENOPHON.

IT was on the 20th day of the Attic month Elaphebolion, in the first year of the 99th Olympiad,* that Xenophon, so celebrated in Grecian history, entertained a few friends at his house in Scillus, a small town of Triphyllia, a district of Elis, and distant about three miles from Olympia. The great annual hunt in honour of Artemis was about to take place. Reclining at the Symposium, after dinner, were to be seen, in one of the banqueting-rooms of the house, several individuals, all ardent lovers of the chase. There was Xenophon, the host now about 60 years of age, a fine handsome man, of a modest and prepossessing appearance,† with grey hair, and animated countenance, which, though it did not bespeak great subtilty of intellect, or profound thought, was full of good common sense, deep piety, and thorough kindliness of heart. At his right hand reclined a distinguished foreigner, Anacharsis‡ by name, a Scythian, who had been on a visit to Lacedæmon, and was Xenophon's guest for the hunt. Gryllus § and Diodorus, Xenophon's two sons, were there; the former was about 23 years old, of strong active frame, and with the courage of a lion. His brother was about two years his junior, and a fine open-hearted youth, though apparently not of such a determined disposition as Gryllus. Two guests from Lacedæmon completed the party. Xenophon did not seem to have suffered at all from his Asiatic campaign, about twelve years before, nor did his bearing show any signs that he took to heart his banishment from his native Athens. He had been resident at this delightful spot of Scillus about ten years, at the time of which I am speaking. Devoted to field sports and farming, proud of his horses and dogs, he lived here a good type of the Greek gentleman. Of course he took interest in politics, and heard with peculiar zest what was going on in democratic Athens. The great quinquennial Olympic festivals brought him into contact with men of his own town, from whom he could learn the state of public opinion at Athens towards himself. But little was said of politics on the present occasion. The pleasures of the chase formed the chief topic of conversation at the Symposium. The merits of certain horses, and the qualities of a good dog, the best places for deer and wild boars, and the preparations for the great hunt, were all discussed with considerable animation. The old general treated his guests with anecdotes of hunting he had taken part in, while with the army in Asia: he dwelt especially on the first-rate sport which was afforded by the chase of the wild ass on the plains of Arabia. He spoke of its amazing swiftness, and of the excellent quality of its flesh—like venison in flavour, but more tender—and told them of the amusement the horsemen had found in pursuing ostriches, bustards, and antelopes, though he had to confess that the ostrich—proverbial amongst the Orientals for its stupidity—had so far proved too clever for its pursuers, who had not succeeded in capturing a single specimen.

"We must drink after the Scythian fashion, my friends, on this occasion," said the host, raising his elbow from the pillow of the couch, and looking full at Anacharsis. "Slave, fill a cyathus of unmixed wine from the crater, and hand it to each of the party." "By Jupiter!" cried one of the Lacedæmonians, jestingly, "our worthy host would have us share the fate of Cleomenes!"* "May the gods avert from each of us so dire a calamity," responded Xenophon; "but we drink to the health of Anacharsis." The Scythian expressed himself

* In the month of March, B.C. 383.

† See Diogenes Laërtius, in his Life of Xenophon.

‡ A descendant, we will suppose, of the celebrated traveller of that name, who was brother of the king of Thrace, about B.C. 590, and the contemporary of Solon.

§ Afterwards killed, bravely fighting at the battle of Mantinea.

* Cleomenes I., a King of Sparta, who died raving mad by his own hand. Some of his own countrymen attributed his death and madness to the habit he had learnt from the Scythains of drinking large quantities of strong wine. (Herodotus, vi. 84.)

highly gratified by the reception he had met with, and remarked on the different customs of nations, saying, "That, while in Greece to drink wine unmixed was considered an improper thing, his own countrymen, on the contrary, always took it so; and that both sexes, indeed, not only drank it, but poured it over their garments, thinking they were thus engaging in a tasteful occupation.* But tell me, O Xenophon," he asked, "what kind of game is to be found in this neighbourhood?" "Fine sport can we show thee, O Scythian guest," the veteran responded; "we have hares, wild boars, chamois,† and stags. Mount Pholoe, close at hand, is a rare wood for game. To-morrow we must try for a stag, as we want meat for the larder. Slave, another cyathus of wine, and we will drink success to hunting."

After this manner the evening at Scillus was spent pleasantly and good-humouredly by all the party, till each retired to his room for the night. Let us glance at the spot where Xenophon lived for so many years. He had been allowed by the Lacedæmonians—the masters of the country for the time being—to settle at Scillus, and had purchased land there, with spoil-money gained in his Asiatic expedition. His dwelling, an unpretending structure of wood, brick, and stone, with a flat roof, on which persons could walk when so inclined, was built for convenience, and not for show, according to the rules he has laid down in his "Œconomics," and, in the main, after the fashion of the Greek houses of the period. The outer door, facing the north, led into a passage, on the left side of which was the porter's lodge, and on the right the stables. In these were five horses, in separate stalls. At the end of the passage was a rectangular space called the *peristyle*, or hall of the *Andronitis*, or men's apartment, with dining-rooms, parlour, and store-rooms, forming the sides of the rectangular hall. The opposite or south end of the house was appropriated to the women. Here Philesia, Xenophon's wife, and her domestics, spun wool and attended to their daily household duties. This part was called the *Gynæconitis*; it was of nearly similar form to the *Andronitis*, with which it was connected by means of a passage, closed by a door or curtain. The house was pleasantly situated among trees of various kinds. The spot had been selected by Xenophon, on account of certain resemblances to the site of the Ephesian temple. A small river, called the Selinus, abounding in fish, flowed hard by. There was another of the same name, near the temple of Ephesus. In the grounds and near the house were to be seen a chapel, an altar, and a statue of the goddess Artemis, made of cypress wood—all of them copies, on a reduced scale, of the great temple and golden statue at Ephesus. A column, with carefully engraved Greek characters, was to be seen amongst the buildings. The inscription ran as follows: "Whoever has this property and gathers its fruits, must sacrifice a tithe every year to the goddess, and out of the remainder keep the chapel in repair. If any should omit to perform these duties, the goddess will herself see to the matter." An orchard of various fruit-trees lay contiguous to the chapel; and, altogether, the landscape offered a charming variety of woodland, meadows, and hills. Mount Pholoe, noted for game, reared its head conspicuously a few miles off. With excellent pasturage for stud and stock, and plenty of sport at hand; with leisure for writing treatises on the management of horses, the breeding of dogs, and the excitements of the chase; what more could a Greek gentleman require? We doubt not that Xenophon spent the happiest years of his life in this pleasant retreat, free from political turmoil, and from the anxieties that attend active military service.

We have already stated that once every year Xenophon held a grand festival in honour of Artemis, the expenses of which were paid out of the tithe of the fruits of the property. It was a feast of great solemnity. Booths were erected for the visitors, and refreshments supplied at the expense of the landowner. The more solid portions of the entertainment were provided for by the Grand Hunt, on the occasion of which the guests previously mentioned had been specially invited. The first thing the party did after the early breakfast on the morning of the 21st was to visit the stables, which, as we have seen, formed a portion of an ancient Greek dwelling-house. Gryllus and Diodorus were the directors of the chase, and selected the company that was to join in the pursuit; they themselves rode, the majority of sportsmen going a-foot. As the horses were led out of the stables they were pronounced fine animals, with their strong limbs, small heads, glistening eyes, and round solid hoofs as hard as flint. As the practice of shoeing was unknown in those days, a good hoof was most indispensable in a horse. By the marks in their teeth the ages of the animals were rising five.* They had been bred and broken under Xenophon's instructions. When Gryllus's steed was brought out he showed signs of restiveness. "That's what I like!" joyously said the youth, "I want something to conquer." Upon this he vaulted on its bare back with the activity of a practised athlete, while the horse reared and plunged in a fashion of his own. "By Equestrian Neptune!" cried Gryllus, "but I will tame you!" "Hold there!" called out his father, with the decision of a commander of cavalry; "do you not see that the animal is frightened? You must exercise patient forbearance, not violent opposition." Saying this the old soldier went quietly up to the animal, and, seizing the bridle, stroked him gently on the neck and head, using soothing words, which by degrees dissipated the animal's fears, and reduced him to a willing submission.

* The words of Plato. *De Legibus*, i. 637.

† The original word is δόρκαδες. Perhaps chamois are the antelopes denoted.

* It is clear, from Xenophon's "Treatise on Horsemanship," that the ancient Greeks knew how to judge of the age of a horse from his teeth.

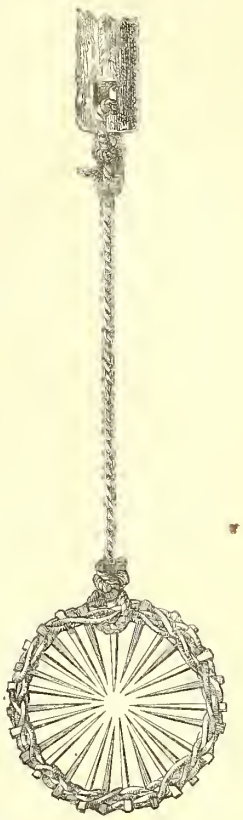
J. Wolf, del

Day & Son (Limited) Lith

Nature and Art, August 1866.

"My son," said he, with a smile on his countenance, "you so far resemble Socrates, that whereas he chose the most ill-tempered woman for his wife, in order that if he gained the ascendancy over her he would have no difficulty in subduing all other women, so you seem to think that your subjugation of a high-mettled horse will enable you to deal with the rest." "Precisely so," responded Gryllus. "But," answered Xenophon, "you must be careful to hit upon the right means of doing this; you must ascertain whether your animal is obstinately vicious, or whether his intractability may be due to some cause independent of his disposition. In any case, such a contest with him as you just now indulged in is a mistake, and unbecoming a generous mind."

"Did you give orders to the huntsman to put down the traps for the deer?" asked Diodorus of his father. "I did," was the reply. The party now moved away in search of a stag, accompanied by five or six Indian dogs, led in couples, and several men with hunting-spears; they proceeded to some hilly land adjoining Mount Pholoe. Whilst they are on the way, let us endeavour to describe the method of capturing deer as practised in the time of Xenophon. If it savours a little of what modern English sportsmen would regard as poaching, we must remember that before the days of gunpowder it was no easy matter to take wild animals in a thickly-wooded country without the adoption of various devices in the shape of nets and snares. The wary stags, even now-a-days not easily stalked with dog and rifle, could seldom be taken in a thickly-wooded country in a fair chase. Besides, as I have said in a previous paper, the flesh of wild animals was more important as an article of diet than it is in modern England. Venison is now a luxury for the rich; in ancient times sporting was not only a pastime, but a means of subsistence. At any rate, on the occasion in question, Philesia, the *placens uxor* of the old general of Scillus, required venison for the great entertainment she was so busy providing. So the huntsman (κυνηγέτης) had received especial orders to set a number of traps in places frequented by the deer. These necessary paraphernalia of a Greek sportsman were used principally in the capture of deer and wild boars. They appear to have been of the form depicted in the accompanying illustration, though, owing to want of perspicuity in the description which Xenophon has given of them, it is not possible to speak positively as to all their details. These traps, then, which were called *podostrabæ, i. e.* literally, "nooses for the feet," consisted of a circular crown of yew twigs, twisted strongly together. In this were fixed several spikes of tough yew-wood and iron alternately, the latter being the larger; these spikes probably radiated towards the centre of the circle, but we have no accurate information on this point. We are not told what was the ordinary diameter of these circular crowns of yew-wood, but I apprehend it was about two feet. The spikes were equidistant, and so arranged that they permitted the foot of the animal to pass between them, and then closed upon the leg. To the periphery of the *podostrabæ* a strong noose, or eye, of twisted hemp was firmly attached, to which again was fastened a rope of the same material, bearing at its other end a clog of oak timber, perhaps about 22 inches long and 4 inches broad, with the bark still adhering to it. Such was the fashion of this instrument, and it was set as follows:—A round hole was dug in the ground about $1\frac{1}{2}$ foot deep, equal in diameter at the top to the crown of the *podostrabæ*, and gradually narrowing below; another hole was made for the clog, and a channel for the rope. The circular part of the snare was then placed in the round hole, and the clog and rope each in their respective places, and all was covered over with leaves and earth.



Several of these snares, then, were placed, the night previously, in localties frequented by the deer, and many eager eyes were watching for indications that an animal had been caught by one or other of them. It is necessary to state that the deer was never retained by the snare in the spot where he had been hampered, but that he always pulled it up, the trap having fastened itself to one of his legs. The mingled feelings of terror and rage which a noble stag would exhibit as he rushed wildly onwards, the snare grasping his limb, and if caught by a fore foot, the clog beating against his face, may be easily imagined. The party had not long to search for a snare which had been turned up. Diodorus* was the first to summon his companions, who ran quickly up to him. "See here," he cried, with great glee, "an animal is in a trap somewhere hereabouts, if we can only find him; and a fine stag he is, too," he added, as his sharp eyes detected the print of a deer's foot on a narrow pathway on the hill. Two large dogs were immediately loosed, and began to try to pick up the scent. Then all joined in the pursuit, the huntsman cheering on the hounds. "At him, good dogs! Bravo, Thymus! Well done, Alce! Forward, forward, dogs!" The scent, however, was not very good, and the dogs were often at fault. Then the numerous party dispersed seeking the track of the clog along the

* As the huntsman knew where the traps were set, of course he would point out the place to the hunters, and enjoin caution.

ground, or upon the rocky parts of it. Soon the huntsman discovered, on the corner of a stone, a small fragment of bark which had been freshly rubbed off the clog. Then he called in his dogs and relcased a fresh couple, who went in briskly, sometimes catching the scent, and sometimes losing it for half an hour; the excitement of the hunting-party continuing to increase. And now the dogs pursue breast-high, at a great pace, leaving the foot sportsmen in the distance. It is clear they are approaching their game. Gryllus and Diodorus alonc are up with them, and catch a sight of the entrapped animal as he crosses a narrow valley between two woods. A rattling "view hallo" soon conveys the cheerful intelligence to the other members of the hunt, who push forward to the best of their power. The stag is nigh exhausted; with panting breath, and eyes half out of his head, he is resolved to die bravely. So he awaits the attack of the dogs. Phyla made the first rush, but was rolled over by a well-directed thrust of the stag's right antler, a deep wound in the chest pouring forth red blood. Gryllus and Diodorus had fastened their horscs to separate trees, and proceeded, spear in hand, to give the animal his death-blow. With a high-aimed throw, one of the spears struck the animal near the top of the shoulder, and the three dogs rushing simultaneously upon him at this juncture, the stag was quickly despatched.

Portions of the hunted animal appeared in due time on the tables of the different banqueting-rooms of Xenophon's house, late on the evening of the same day;* and it is needless to remark that ample justice was done to them and the rest of the good things prepared. Philesia had sent to the towns of Scillus and Cyllene for cooks, who had been busy for the last three days making sweetmeats and other delicacies. Besides venison, there were young goats, lambs, sucking-pigs,* and fowls, supplied from the farm by the bailiff; as well as quantities of sausages, salad, leeks and onions. The fish had been brought from the lagoons on the coast of Elis. There were eels stewed in beet, turbot, anchovies, and other dainties, prized by the Grecian palate. After all had satisfied themselves, the numerous tables were removed; the floor, which was strewed with bones, bits of bread kneaded to a dough,† and the refuse of the plates, was swept; and water was handed round to the guests for washing their hands. The dinner ended with the usual libation. The dessert consisted of figs, nuts, olives, salt mixed with spice, to improve the taste of the wine, cakes, and sweetmeats. The mixed wines, red and white, of various kinds, were rendered deliciously cool by means of ice. In the midst of the symposium a man of Syracuse entered, and with him a girl who played admirably on the flute, and another who performed the most astonishing feats. Among others she leaped head foremost over a hoop which had a number of swords fixed into it standing upright, and then sprang out of it, leaping clean over the pointed weapons. Of course, the party played at the cottabus, and with dice, as was usual at Greek wine parties. They also amused themselves by asking riddles. If a person made a wrong guess, the fine was to drink off a certain quantity of wine without taking breath; if he guessed right, he was rewarded with a chaplet or with cakes. After such a manner did the party enjoy the evening after the hunt.

* The venison would be too fresh for an English palate, but would probably be tolerably tender, if hunted deer is like hunted hare.

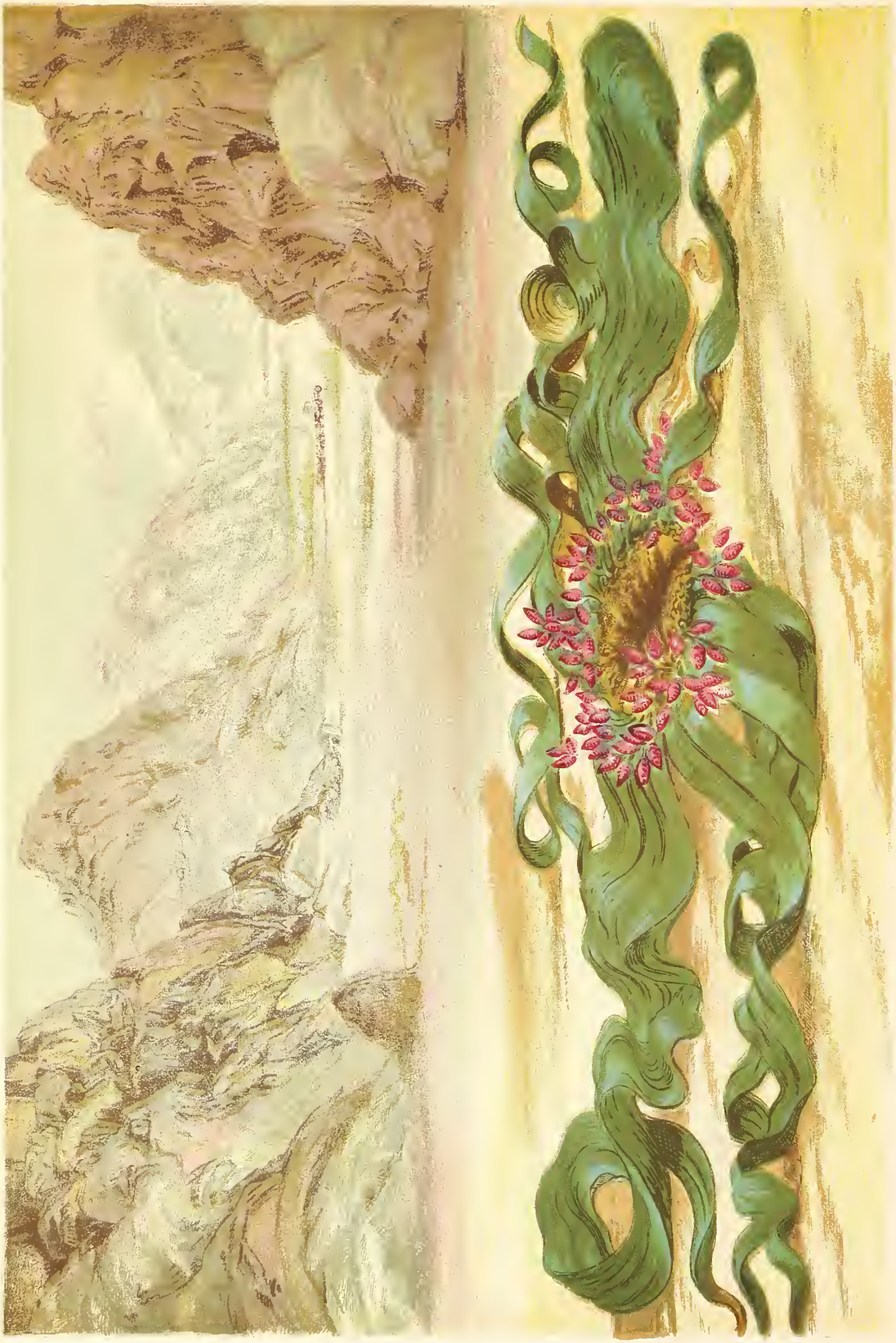
* τὸ δικαιότατον κρέας, as Plutarch says of the flesh of pig.

† ἀπομαγδαλία. The ancient Greeks used neither knife nor fork, but ate with their fingers, and had no dinner-napkins, they cleaned their fingers with bits of bread.

FISHING WITH THE GREEN ELM CATERPILLAR.

By W. B. Lord, Royal Artillery.

THERE are few baits—excepting perhaps the live minnow—with which larger fish are to be taken, than with the elm caterpillar, which will be found in considerable numbers at this season amongst the short, spreading twigs surrounding the main stems of the elm trees in most localities. To capture them I have been in the habit of using an inverted umbrella, holding it by the ferule end with the left hand, whilst with a long stick held in the right hand I thrashed the branches thoroughly, receiving the falling caterpillars in the umbrella, which was held ready beneath, spread like a cup for their reception. The caterpillars are then easily separated from the bits of stick and leaf which accompany them in their fall, and are conveniently kept for use in a flat tin box, with plenty of holes in it for air. A two-yard trace of fine, round, well-selected gut, "round plait" silk line, and a long, stiff, light rod, should be used for this kind of fishing. The hook from Nos. 8 to 10, Kirby trout pattern, rather short in the shank, and of stout wire. A strong, sharp pocket-knife, and long-handled landing-net should be provided, as many of the haunts of the finest fish are at times so over-grown with bushes or water-plants, as to render it necessary that a hole should be stealthily cut, through which the rod with the gut trace wound spirally round it may be introduced. When fairly over the water about to be fished, and free from impediments, the bait may be dropped



quietly down by turning the rod round in the hand and so unwinding the wound-up trace. Some little care is required in baiting the hook with the caterpillar in order that it may not be torn; the point should be entered at the back and brought out the length of the shank down the side. Three or four No. 4 shot should be placed on the trace at about four inches apart, and the lower one about sixteen inches from the hook.

In putting on the shot great care must be taken not to crush the gut in closing the flat surfaces of the divided lead, and it is a good plan to first partially close the slit over a bit of fine wire, before introducing the gut, which is thus kept round, instead of being squeezed flat, and thereby seriously weakened. The "approach" to the water-side must be as stealthily as that of a red Indian or deer-stalker. Every tree trunk, rock, or tuft of fern being used as a screen to guard the lurking fisherman from the keen eyes of the ever-watchful fish. The bait should be dropped quietly and naturally on the water, as if the caterpillar had lowered himself from the branches above by his web, and "paid out" too much of it. By gently lowering the top of the rod the green lure is now allowed to sink quietly away, and when it has reached within a short distance of the bottom, should be brought by short lifts, "sinking and drawing," so to speak, up again. Very few fish are abstemious enough to resist this attraction, and a number will be often seen shooting off at once through the clear water, like arrows towards the bait. Just an instant should be allowed after the bait disappears from sight, or the indescribable but pleasant sensation which a biting fish sends thrilling through the rod is felt; then strike sharply out, sideways and upwards, and should you be fortunate enough to hook your fish, keep a tight line; hold his head well up, and get your net under him as quickly as possible, as there is rarely much room afforded for playing a fish in situations where caterpillar fishing is most destructive, and which the larger members of the finny race select as their favourite haunts.

THE WELWITSCHIA MIRABILIS

(*Plant of Hykamkop*), *South-West Africa.*

By T. Baines, F.R.G.S.

On the desolate coast of South-West Africa, the sand, drifting from any projecting point before the prevalent southerly wind, forms shoals running northward nearly parallel to the coast, and inclosing bays which afford secure anchorage to vessels of almost any size, and lagoons into whose still waters countless myriads of smaller fish are chased by sharks, porpoises, and many varieties of the smaller whales. Their shallows are frequented by long lines of flamingoes, so numberless that, when upon the wing a rose-coloured cloud seems quivering in the air. Here snow-white pelicans—their forms lifted to an enormous height by the mirage—loom like the canvas of some distant vessel: there duikers, or cormorants, similarly distorted, look like stranded hulks; cover the surface of the bay with long, dark lines, as they wheel in mazy evolutions; or blacken patches of sand for many hundreds of yards when they settle.

Upon the shores of some of these bays, fisheries have been established by merchants of Cape Town, who send, for the use of those employed, supplies of food and stores, and sometimes *fresh water*, by the vessels which call occasionally to collect the produce of their industry. Some serve as points of departure for traders or travellers to the interior. Of these Walvisch (or Whale) Bay (Lat. 22° 57′ S.) is the most important, and here upon the broad flat formed by the estuary of the Kuisip River—overflowed by every spring-tide, and flooded with fresh water perhaps once in ten years—stood, when I arrived in 1861, the unpretending wooden dwelling of Mr. Latham, in which goods requiring protection were stowed till they could be forwarded to the interior. Neither grass nor water was to be found there, and waggons were either loaded up at once, or the cattle sent to graze at a distance till again required. After crossing this dreary flat—odorous with the remains of flat fish drying in the sun—the dry bed of the Kuisip winding between shifting sand-hills, served us for a road. Our wheels sank deeply, and the sand flew from their spokes as they revolved, like water from the paddles of a steamer; while the dense, hot dust-cloud so raised, rendered it impossible to breathe to leeward. The small patches of samphire gave place to a semi-saline vegetation. Stunted dabbies or tamarisks, ganna bushes, and a few thorns appeared; and the "nara," a half-creeping thorny shrub, bearing a no less prickly fruit, somewhat bigger than an ostrich's egg, clothed, and helped somewhat to bind together, the sides of the loose sand-hills. The fruit which is about the sole vegetable food of the few poor natives during nearly a third part of the year, is, when ripe, of a yellowish green colour. On breaking the thin, gourd-like shell, a deep yellow or orange coloured pulp appears, which may be eaten with a spoon, and tastes deliciously; but is apt, if too freely indulged in, to bring on nausea, and soreness of the lips and gums. The seeds, which are numerous, and not unlike those of a melon, are scattered through the pulp, but are not eaten with it. The natives collect them carefully, dry, and keep them in bags of skin,

either for future use or for sale to Europeans, who find amusement in cracking and eating them as after-dinner nuts. A cake is made of the pulp by evaporating the mixture. It will keep; is rich, well-tasted, and looks something like coarse sugar. As Andersson remarked very truly, "Without the nara this barren land would be almost uninhabitable; with rare exceptions it grows only in the bed of the Kuisip, within a few miles of the sea. All animals, from the field-mouse to the ox, the feline and canine races, birds, especially ostriches, devour it. Even the white Egyptian vulture feeds on it—the only instance, save one, in which this kind of bird is known to partake of vegetable food."

The first day's journey from the bay is generally very short. The cattle are sent to refresh themselves as they can; and on the next, the waggons "climb out" to the elevated Nariep desert. This is a barren plain of loose sand, quartz, and other pebbles. It has rocky ridges, destitute of grass or verdure, where the few leafless shrubs, breaking like rotten seaweed, have insides—like the apples of Sodom—full of nought but ashes; and where, if anything green should meet the eye, it is more likely to prove a trace of metallic tint upon a rock, than a vegetable.

We halted late in the evening to make coffee, the ruddy firelight gleaming on the white waggon-tents and on the oxen as they stood patiently in their yokes awaiting the finish of our short refreshment, and seeming to know as well as we that it was useless to outspan them on such a desert plain. We crossed the Dupas river, a little stream, which like the Kuisip had not run with water for ten years, and outspanned before daybreak, with some low hills of weathered granite on the north, indicating the commencement of the ravine, inclosed by barren pyramids, cones, and precipices of fantastic shape and arid hue, by which we were to descend more than five hundred feet to the valley of the Swakop.

The yellowish grey of the generality of the rock was relieved by darker tints, banded by light pink veins of quartz, crossed by lodes of black iron-stone, or speckled by black micaceous substances, splitting easily into thin glittering laminæ. The whole surface seemed to be undergoing complete disintegration, and in places it was almost dangerous to step on what seemed a solid block of granite, lest it should crumble under foot. In this manner caves, holes in the rock, arches, and blocks of fantastic shape, some like gigantic human features, or other grotesque resemblances are formed—and names more graphic than poetical are applied to many of them.

The deep ravine of the Swakop, cleft thus in the solid rock, has been partially filled with sand brought down by the periodical torrents, and this has become a level bed of, it may be, five hundred yards in breadth, and of almost unknown depth. The brief flushes of the rainy season, deep enough to make the crossings dangerous, and sometimes impassable for waggons, soon pass away; but meantime this bed of porous sand has been saturated with water, which remains permanently screened from evaporation, or from pollution by wild or domestic animals, and may be reached when required by digging, or in some places by merely scratching in the sand; while in others, as at Hykamkop, it appears upon the surface, and after flowing a short distance again finds the sand in sufficient volume to entirely absorb it.

Here, about seven years previous to my visit, a tree called the wild tobacco had been introduced, and spreading rapidly with its cool green leaves and yellow tubular flowers, became quite a feature in the landscape; while the tamarisk, the mimosa, the kameel doorn, and in favourable places the ana, a gigantic thorn-tree, much used for building purposes, grew upon the low secondary bank that had formed along the base of the hills.

Mr. and Mrs. Eggart, of the Rhenish Mission, who were respectively turning out the goats and preparing early coffee, gave us a hearty welcome to their little house, which was built of reeds, rather as a cooling screen from the sun's rays than a protection from any possible rain. A poor fellow was lying ill of fever and bowel complaint in another hut, and I was glad to be able to promise him a little quinine, to which one of my friends kindly added a small quantity of spirit. Mr. Dixon presented me with two buffalo heads, now in the Museum at King's Lynn, and led me to the waggons by a more direct, but less picturesque ravine, partially filled with sand, forming a broad, flat bed, and in this my attention was drawn to a singular plant of immense size. Whether it were new to science I could not tell; a vagrant artist can neither afford nor carry the necessary books of reference. I saw that it was new to me, and determined to secure the best sketch and specimen I could before I rejoined the waggons.

The two leaves, nine or ten feet in length, and of a pale green colour, except where somewhat withered at the ends, were split by the wind and drought into ribbons. Some of these were fourteen inches or more in breadth, lying curled in every direction upon the sand, and conveying at first sight the idea that there were four, instead of two original leaves. These issued from the circumference of a woody mass, with a rough bark or cork-like surface, rising a foot or so above the ground, and bearing round its edges, just within the insertion of the leaves, an assemblage of small stems about six inches long dividing into smaller branches, each of which bore from three to five cones, three inches in length, and $\frac{3}{4}$ inch thick, of an elongated oval form and crimson colour, tinted with green in the less developed specimens, and marked with scales like those of a fir-cone. Numbers of insects —a kind of field bug—fully an inch in length, and prettily marked with red and yellow, sheltered themselves beneath the leaves, but in the lapse of years my specimens of these have gone adrift, and though I could from memory sketch them sufficiently well for artistic purposes, I could hardly pretend to scientific accuracy in the delineation.

My drawing was made on the 9th of May, 1861,

and on the 25th of the same month I had the good fortune to fall in with a splendid specimen of the gigantic yellow-flowering aloe, of which, as Dr. Hooker has very kindly granted me access to the drawings I presented to the national collection at Kew, I hope shortly to be able to furnish you with a figure.

On my return to Walvisch Bay I entrusted my specimens to Mr. Latham, for conveyance to my friend Logier, who, on the 18th of December, received permission to hand them over to the Colonial Office to be forwarded to the Royal Botanic Gardens at Kew.

In due time my friend received the following letter, which, however, from the difficulty of communication, I had no opportunity of seeing till my young friend, E. Barry, met with it, in a parcel of newspapers forwarded to me, at Lake Ngami, on my return with Mr. Chapman from the Zambesi in 1863:—

"*Kew Gardens, London,*
"To F. Logier, Esq. 1862.

"Dear Sir,—I am extremely obliged to you for so kindly forwarding me the excellent drawings and specimens of plants from my friend Mr. Baines. The specimen of the aloe was quite dead and rotten, but the other plant has given me uncommon pleasure, inasmuch as, old a botanist as I am, I never saw it before, nor has more than one person ever done so; that person is Dr. Welwitsch, a German botanist, long resident at Loando. He made a journey south of that territory, and, in a letter to me, described the new plant so accurately that, the moment my son, Dr. Hooker, and I saw Mr. Baines's specimens and drawings, we both said that must be Dr. Welwitsch's new plant. We shall now be able to publish an account of it.

"Mr. Baines has not done me the favour to write to me, so that I take the liberty to inclose my note of acknowledgment to you, as I have no idea in what part of Africa he is.

"The drawings of the great tree-aloe are also most interesting; but the species is certainly not the dichotoma, as Dr. Ecklon suspects, but probably a new species. *Ex Africâ semper aliquid novum.*

"Yours very faithfully, and with many thanks,
"W. J. Hooker."

Sir William also wrote a letter requesting farther information, and, in my absence, Mr. Logier forwarded it to Mr. C. J. Andersson, then in Otjimbengue, requesting him to forward a perfect specimen. This was brought down on the 15th of September, 1862, planted with its native soil in a flour-barrel by Mr. Latham, who, finding my friend at that time an invalid, very kindly conveyed it on board the mail-steamer on the 22nd.

In reference to this specimen, Mr. Andersson, dating from Otjimbengue, February 12th, 1862, gave the following interesting particulars:—

"The plant you inquire about, and which has so awakened your curiosity, is well known to me. Indeed, it is so peculiar as scarcely to be mistaken even from the rudest description.

"It is only found in one single locality, which is exceedingly circumscribed; that is, as regards Damara Land. It grows in sandy places, and luxuriates when it can find a few stones to fix its extraordinary tap-root, penetrating often several feet deep, so that it is indeed a work of labour and patience to extract one single plant. I have been thus occupied more than an hour, and even then have come away with only a part of the root.

"The leaves attain a length of several feet, a small portion only of the point being withered, in other respects they are evergreen; they are straight-grained, and you can tear them from top to bottom without deviating a single line from a straight course.

"Rain rarely or never falls where this plant exists. I have crossed and recrossed Damara Land through its entire length and breadth, but only found it growing on that desperately-arid flat stretching far and wide about Walvisch Bay, or between the 22nd and 23rd degrees of south latitude.

"It is most common about the lower course of the River Swakop; but my description is very inadequate, and I shall endeavour to procure the plant itself, and forward it at an early date to England.

"Indeed, I would have sent it years ago, had I not been under the impression that you already had specimens; for I assisted Mr. Wollaston once to excavate a couple, which I thought he purposed presenting to Kew. I know that they were received at the Botanical Garden at Cape Town, for I saw them there only the other day."

In the *Botanical Magazine* of March 1st, 1863, it is thus noticed:—

WELWITSCHIA MIRABILIS. (Tabb. 5368, 5369.)

African Welwitschia.

Nat. Ord. GNETACEÆ. POLYGAMIA MONADELPHIA.

Gen. Char.—*Squamæ* strobili homogami 4-fariam imbricatæ, perplurimæ floriferæ, fructiferæ valde auctæ. *Flores* hermaphroditi et fœminei. FL. HERM. *Perianthium* 4-phyllum, foliolis 2-seriatis, inferioribus connatis. *Stamina* 6, monadelphia; antheræ 3-loculares. *Ovuli* integumentum disco stigmatiformi terminatum. FL. FŒM. *Perianthium* ampullaceum, compressissimum, 2-alatum. *Ovulum* maris, sed processu styliformi recto apice simplici lacero. *Fructus* siccus, squamis membranaceis strobili velatus.—Truncus *obconicus, lignosus.* Folia 2, *opposita, longissime linearia, dilacerata*, nervis *parallelis.*—*Hook. fil.*

WELWITSCHIA *mirabilis.*
WELWITSCHIA mirabilis. *Hook. fil.* in Trans. of Linn. Soc. v. 24, p. 1, cum tabulis I.—XIV.

"The old adage, 'Semper aliquid novi ex Africâ provenire,' holds good in the present day as in times long gone by. It is little more than two years and a half since the first knowledge of this singular plant (the subject of our two plates) * reached Europe, in a letter addressed to myself by its discoverer, Dr. Frederick Welwitsch, a talented

* See *Botanical Magazine*, March 1st, 1863.

naturalist, then on a botanical mission at St. Paul's, Loando, on account of the Portuguese Government. The account was soon published, and excited, as may be supposed, an interest among the most eminent European botanists which has never been exceeded, if equalled, since the discovery of the *Rafflesia*.

"Nor did it want an historian to describe fully its character and affinities, and external and internal organization, in the work above quoted.

"Having, however, actually received living plants at Kew (though in a dying condition), besides copious dried specimens, through the kindness of two gentlemen still residing in South-Western Africa—Joachim Monteiro, Esq., of Loando, and C. J. Andersson, Esq., of Damara Land,—we are justified in giving it a brief notice in the *Botanical Magazine*, and thus extending a knowledge of it among many who have not the opportunity of consulting the Linnean Society's 'Transactions.' As to the cultivation of the plant in our stoves, we despair of it altogether, as much as we do of rearing the *Rafflesia Arnoldii*. Climate, soil, and native locality are all against success. Yet trials should, and no doubt will, be made to raise it from seed when opportunity may offer.

"Dr. Welwitsch found the plant, in 1860, inhabiting the elevated plateau near Cape Negro, Western tropical Africa, in lat. 15° 40′ S.; and Mr. Thomas Baines, the able artist in Gregory's exploring expedition across North Australia—and who accompanied Dr. Livingstone on the Zambesi mission—while travelling, the following year, in the Damara country, between 22° and 23° S. and five hundred miles south of Cape Negro, was so struck with its appearance that he made coloured drawings of it and others, and sent them to me, with some cones—but these being more than a year *en route*, not dried, and packed with the succulent leaves of a gigantic aloe, were much decayed.

"Happily the cones contained ripe seeds, which, by hardening in alcohol, enabled Dr. Hooker to satisfy himself of their great similarity in development and structure with those of *Cycadeæ* and *Gnetaceæ*. The native name *Tumbo** was communicated both by Dr. Welwitsch and Mr. Baines; but as the same name is given to the gigantic aloe of the country, it is a generic rather than a specific name among the natives, for to the branch of cones Mr. Baines had written, 'Called by the Hottentots *Ghories*, and by the Damaras *Nyanka Hykamkop*.' As we were now in possession of specimens, however imperfect, of this wonderful plant, from Mr. Baines, and very anxious that its discovery should be announced, Dr. Hooker wrote to Dr. Welwitsch, reminding him of a request he had made that a full account of his discovery should appear in the Linnean 'Transactions,' and urging him either to make the plant known himself to the scientific world, or to send his specimens here for publication, proposing at the same time that it should be called *Welwitschia mirabilis*.

* *Otjitumbo*, a stump.

"Mr. Monteiro also sent us plants collected at Mossamedes, or Little Fish Bay, in 1862. These were gathered in a journey of thirty miles from the coast, in ground of hard quartzose character, and generally near little ruts worn in the plain by running water in the rainy season. Several Portuguese of Cape Negro assured him they had seen specimens measuring, as Dr. Welwitsch also said, six feet across the apex of the trunk, and even larger, and with the ribbon-like leaves two and even three *bracas* (fathoms) long."

The letter of Mr. C. J. Andersson, previously quoted, is then given, and the notice concludes with the following description:—

"Descr.—In this we shall confine ourselves to the more popular portion of Dr. Hooker's, referring for the more scientific history to the Linnean 'Transactions.'

"It is a *woody plant*, said to attain a century in duration, with obconic *trunk*, about two feet long, of which a few inches only rise above the soil, presenting the appearance of a flat, two-lobed, depressed mass, sometimes, according to Dr. Welwitsch, attaining fourteen feet in circumference, and looking like a round table. When fully grown it is dark brown, hard, and cracked over the whole surface much like the burnt crust of a loaf of bread. The lower portion forms a stout *tap-root*, buried in the soil, and branching downwards at the end. From deep grooves in the circumference of the depressed mass, two enormous *leaves* are given off, each six feet long (and probably often much more), one corresponding to each lobe of the trunk. These are quite flat, linear, very leathery, and split to the base into innumerable thongs, that lie curling upon the surface of the soil.

"Its discoverer describes these two leaves as being present from the very earliest condition of the plant, and assures me that they are in part developed from the two cotyledons of the seed, and are persistent, being replaced by no others. From the circumference of the tabular mass above, but close to the insertion of the leaves, spring stout dichotomously branched *cymes*, nearly a foot high, bearing small erect scarlet *cones*, which eventually become oblong, and attain the size of those of the common spruce fir. The *scales* of the cones are very closely imbricated, and contain, when young and still very small, solitary *flowers*, which in some cones are hermaphrodite (structurally, but not functionally), and in others female.

"The *hermaphrodite flower* consists of a *perianth* of four pieces, six monadelphous stamens, with trilocular globose anthers, surrounding a central ovule, the integument of which is produced into a styliform sigmoid tube, terminated by a discoid apex. The *female flower* consists of a solitary erect *ovule*, contained in a compressed utricular *perianth*. The mature cone is tetragonous, and contains a broadly-winged *fruit* in each scale. Every part of the plant exudes a transparent gum. Welwitschia is a dicotyledonous plant, belonging to the gymnospermous group of that class, and having a very close affinity with both *Ephedra* and *Gnetum*, but

differing from all previously known gymnosperms in having hermaphrodite flowers, and in wanting the disk-bearing wood-cells. Notwithstanding these peculiarities, Dr. Hooker places it the Nat. Ord. *Gnetaceæ*, of which it is the only South African representative."

Of course this plant, common as it is in its own limited localities, must have been seen long ago by many persons. The only wonder is that no one had previously sent it home.

Mr. Chapman took stereoscopic views both of it and the great tree-aloe. As we did not effect a junction till far beyond the boundaries of Damara Land, neither of us knew what was being done by the other. In 1863 he sent, and in 1864 conveyed personally, specimens to the Cape; and, in reference to these, received from the Rev. J. C. Brown, LL.D., the Colonial Botanist, a highly complimentary letter, which has since been published, and from which I take the liberty of making a few extracts:—

"*Wynberg*, 11*th November*, 1864.

"James Chapman, Esq.

"My dear Sir,—I rejoice to find that you have brought down from the interior another specimen of the *Tumboa* or *Welwitschia mirabilis*; and I feel obliged to our mutual friend, Mr. Layard, for bringing it under my attention. Before I left England I found the interest awakened by the descriptions given of this plant to be very great. . . . . The plant was found by Dr. Welwitsch, whose name it bears, in 1860; but I am informed by a gentleman in this neighbourhood, that, long before 1860, he had seen these plants in Damara Land, and, in one of his journeys, endeavoured to uproot some specimens for a near relation in the colony, a lady taking an interest in the cultivation of rare plants; but he never imagined, he says, that plants so abundant as these could be unknown to men of science: and thus may it be with many travellers in regard to plants which, from their abundance, have ceased to interest them, but of which botanists know nothing. About the time of either Dr. Welwitsch first writing of the plant to Sir Wm. Hooker, or of Mr. Baines forwarding to him his drawings, a specimen was brought to Cape Town by Mr. Wollaston, and given to his friend, Mr. M'Gibbon, the Superintendent of the Botanic Garden. It was dead; probably, in consequence of the means which had to be adopted to transport it to Cape Town; and it consisted, I am told, only of one half of the plant, with dry withered remains of the leaf attached. This was sent to England in the beginning of 1863, and must have been obtained not later than 1861; and I have testimony that it was pondered over again and again by, at least, one of the Commissioners of the Garden, who has spent much time, labour, thought, and money, on the South African flora. In 1862, Joachim Monteiro, Esq., of Loando, collected some plants at Mossamedes or Little Fish Bay, and these he sent to Kew. In the same year specimens were sent by Mr. Andersson. Last year, 1863, a living specimen sent by you to Mr. Rawson, then Colonial Secretary at the Cape, was forwarded to England, and now you have brought with you another living specimen.

"Dr. Hooker describes it as a woody plant, said to attain a century in duration, presenting the appearance of a flat, two-lobed, depressed mass; sometimes, according to Dr. Welwitsch, attaining fourteen feet in circumference, and looking like a round table.

"Some of the specimens seen by you seem to have been of a corresponding magnitude, their weight being estimated by the hundredweight, and a hogshead being spoken of as necessary for their conveyance.

"Let any one look at that you have brought, and imagine what such gigantic specimens must be. This looks like two immense clam-shells, or two lobes of an immense bean, measuring some 18 inches across, partially opened with the intermediate space so filled that, when viewed edgeways, it presents an elongated heart-shape, being less deeply situated in the ground than Dr. Hooker describes, appearing somewhat wedge-like, and having rounded edges forming the sides of a depression running along its upper surface in its longitudinal direction. This depression, and a considerable portion of its upper surface round the extremity of the depression, is covered with solid circular ridges about half an inch in diameter, the nature of which may be conjectured and described, but does not at first appear.

"In the specimen brought by you, the place where the leaves proceeded is like a crack or rent, such as would appear if two layers of a monstrous clam shell had separated to allow the protrusion of the leaves. These rents close in moist weather, and open in dry, when the interior surface presents the whitish appearance seen between the leaves of some species of the blood-flower (*Hæmanthus*), and the candelabra flower (*Brunsvigia*); and it is so suggestive of a bulb-like structure, that I do not wonder that this portion of the plant is generally spoken of as a bulb.

"Dr. Welwitsch states these leaves are never renewed or replaced. To this also, should you revisit the country, may I ask you to give your attention, as the fact may be indicative of much besides. From your observation of the leaves being more withered at one season than another, there seems to be, at times, a fresh vigorous growth at their base.

"I am glad that you sent, some time since, a small case of these cones to Kew, as parties in England and elsewhere may be desirous of examining them.

"I have used throughout the designation, Tumboa. Dr. Hooker says, the native name, Tumbo, was given both by Dr. Welwitsch and Mr. Baines; but to the bunch of cones Mr. Baines has written, called by the Hotentots, 'Ghories;' and by the Damaras, 'Nyanka Kykamkop.

"Dr. Bleek confirms the interpretation you have given of the latter name, the bulb or plant of

Koom Kop. Nyanka being the Damara designation applied to a plant, or, if I understand you rightly, to a flowering bulb; and Koom' Kop being the name of the locality where it is found.

"The Damara name supplied by you, *Otjitumbo otjihoro*, or stump with a head, embodies the previous designation given by Dr. Hooker. *Nyanka*, *Otjitumbo*, and *Otjihoro*, I understand to be Damara words; and Koom' Kop, to be a corruption of a Seroan or Hottentot word, implying some reference to three rivers."

It is impossible, even in the quotations I have taken the liberty to make, to do justice to Dr. Brown's complete and exhaustive scientific description of this plant. My object has been rather to extract what more particularly refers to the labours of my friend and I trust that when his journal is published, fac-similes of his stereoscopic views of these and other objects of interest, as well as much valuable information will be laid before the public respecting the Ethnology, Zoology, and Botany of Southern Africa. Several of his specimens are in the museum at Kew, and others brought from the west coast by Sir A. P. Eardley Wilmot, R.N., may be seen in one of the conservatories, where every effort is being made to maintain their vitality.

LITHOGRAPHIC STONE.

By W. B. Lord, Royal Artillery.

OUR simply stating that the stone to which we are indebted for so many graphic, charming, and life-like representations of both animate and inanimate objects is of the "Lias" order, belonging to the "Bavarian Jura" formation, might, to a certain number of our readers, prove all-sufficient, and at once explain to them the nature of the subject with which we are about to deal. There are others, not versed in the science of geology, who would wish for more than the name of the formation to which the stone belongs, and ask for further and more extended data, as to where it is found, what it contains, the position it occupies on the earth's crust, and, last, but not least, what it is worth. To the latter class, then, do we address ourselves, trusting that our stone may not prove a heavy burden.

In the neighbourhood of Aichstadt, in Bavaria, extensive quarries and deep workings have been established, where the stone, in vast quantities, is raised from its bed. Solenhofen, too, has its name favourably associated with lithographic stone; whilst the picturesque and richly-wooded heights in the vicinity of Pappenheim are built up, so to speak, layer on layer, with this interesting and valuable deposit. The broken heights stand up in bold, sharp outline, more like to the scarped walls and vast remains of huge fortifications of some past and forgotten age, than to Nature's monuments, reared in commemoration of extinct races. In these valleys ceaselessly ring out, in clear music, like the clink of the armourer's anvil, the lusty strokes of the quarryman, who, with ponderous hammer, breaks into suitable fragments the flat slabs already displaced and ready to his hand. Those of our readers who have travelled by the Great Western Railway between Swindon and Bristol may perhaps remember certain cuttings, near the latter place, against the sides of which stand clearly-marked, straight, even layers of light-grey stone, as if the kitchen of some comfort-loving ogre of that vague period known as the "dark ages" had been ruthlessly cut through by invading "navvies," and that these were the broken edges of the flags. These floor-like layers are "white lias," closely allied to the true lithographic stone, and it is questionable whether carefully-selected specimens from this district might not be found even and compact enough in grain to be made available for some descriptions of lithography. The dolomite or magnesian limestone deposits associated with the lithographic-stone formations of the "Jura" are remarkable for the interesting and curious bone-caverns found amongst them. The contents of these caves mainly consist of the remains of animals which have here lain buried for countless ages. These are merely affairs of yesterday when compared with the rocks deep amongst whose clefts and crevices the ancient caverns are formed. The neighbouring rocks, in turn, contain, as we shall see, remains of creatures older far than those whose bones are entombed amongst the cavernous vaults of the dolomites. Strange it is that the very stone on which, when polished and prepared, the artist, with skilful touch and pigments of varied hue, depicts the richly-shaded dragon-fly, or banded, pearly fish, to delight the eye of the lover of Nature and Art, should contain, sealed up within its own hidden recesses, like flies in amber, not only dragon-flies, fish, and shells of the graceful nautilus, but old-world types of life so strange, so incongruous, and startling, that, beside them, the "roc" of Sinbad the Sailor, the hideous dragon which Saint George is popularly supposed to have bravely slain in single combat, and the huge serpent killed by Hercules before obtaining the apples of the Hesperides, become almost probabilities. Stranger than all these is the very anomalous and remarkable bird which the astute powers of observation and knowledge of comparative anatomy possessed and brought to bear by Professor Owen has rescued from the category of lizards, amongst which it was for some time associated, and placed in the position it now occupies. The existence of fossils on the surface of

the stone is, however interesting to the geologist, objectionable in a lithographic point of view. Still, to one of them are we indebted for the singular remains which have caused so much doubt and question. A feather, and then some bones, were found. The great detective inspector of science, "from information he was in possession of," considered the so-called Saurian an impostor. "You, sir, *are a bird*," said he. "You are wanted. I have my eye on you. I have counted every process in your very irregular tail, measured your claws, and shall very soon find your head; so you had better come along quietly at once. I am Owen; it is of no use trying to deceive me; you may as well confess yourself a bird forthwith, and save trouble."

An anecdote, related by the peasantry on the borders of the Black Forest, of the late Baron Cuvier, who was for some time prosecuting his researches in that neighbourhood, may serve to show how dark superstition and respect for the faithful investigator of Nature's secrets often go hand in hand. It is a veritable Black Forest legend, and, therefore, must be received accordingly. The Baron, say they, was a man above fear. He would plunge into the very depths of the forest, heedless of the sprites and goblins reported to dwell there as plentiful as blackberries. "This sort of thing will not last," said Grandfather Hans, a man thoroughly versed in phantom lore; "the Baron will some day get into the enchanted grove, and then he never can return to us: the demon of the forest would eat him, to a certainty. Oh, Baron," said he, "take heed of what I say; never venture beyond the 'Hunter's Oak,' at the opening of the 'Black Grove,' or you will repent it." "Very well, Grandfather Hans," said the Baron; "I will remember." But, not remembering the caution of Grandfather Hans, the Baron next day wandered, book in hand, on and on, past the Hunter's Oak, down the grove to the very "Kobold's Rock" at the bottom, and then, seeing the sun sinking behind the pines and night coming on, he turned to retrace his steps. There, as might be expected, stood the demon of the forest, a sight most hideous to look upon. "You cannot return," growled the demon. "For what reason?" asked the Baron. "Because," said the terrible fiend, "I am about to devour you for daring to intrude on my realms." "Indeed!" was the calm reply: "pray let me examine you; your appearance and physical conformation are, to say the least, new to me, and are noteworthy. So-so—let me see—horns, hoofs cloven, caudal vertebral processes numerous, forming a perfect tail. Sir Fiend, you are a *ruminant*, and very few degrees removed from a cow," severely remarked the Baron. "*You* eat *me!* Absurd! preposterous! Get out of the path. I pity your anomalous position; but you ought to be ashamed of yourself." And the demon was ashamed of himself, and sneaked off out of the Baron's sight, a wiser, if not a better, member of his order.

To return then to our stone, and that which may now be fairly called Professor Owen's bird, and, without question, the oldest ever discovered. True it is, that, in a peculiar kind of sandstone, of age perhaps as great as that of lithographic stone, found in the valley of Connecticut, in America, numerous foot-prints of birds have been found; but, strangely enough, no bone, feather, or aught besides the impression of their feet on that which, when they lived, was, no doubt, soft ooze, partially submerged sand flats, and marsh mud. Here these old-world waders, stork, and crane-like birds, sought their food amongst the sedge and weeds, devouring the reptiles, fish, and inhabitants of shells, which, even themselves, are now extinct which then abounded. The Professor's bird, "*Archæopteryx Macrura*," is, at any rate, as old as those which, like the unwelcome intruder on the shore of Crusoe's Island, have left a foot-print only, to tell of their visit. He has, far more satisfactorily, left nearly the whole of his bones as a legacy to inquiring naturalists; but is, alas! like "Mayne Reid's Horseman," "without a head." In size, it has been by some compared to a rook; but I am of opinion, from the length and proportions of the leg, and some other bones, that it must have stood much higher, and been of much slighter form. The most remarkable and anomalous feature presented by the remains, as they lay partially imbedded in the stone, is the long, slender, rat-like tail, composed of twenty processes. From each of these a pair of quill feathers projected laterally, presenting, when complete, the appearance of one large, flat feather, much in external form like those from which pens are made, but built up of smaller ones like the side leaves to the frond of a fern. The wing feathers appear, so far as I can see, much like those of birds of the present period. It is to be hoped that some fortunate chance may bring to light other remains of these truly ancient birds, in order that their perfect form may be known.

The value of lithographic stone, in connection with pictorial illustration, is becoming too well known to need comment here. It is imported into this country in immense quantities, and is worth, to the trade, from one penny to threepence per pound, according to size. Some idea may be formed of the quantity in demand, and the sums expended upon this material, by the mere fact of the publishers of this journal having, at this moment in their stores, from twelve to fifteen hundred tons, valued at £20,000. Thus, then, we read, literally, "sermons in stones and good in everything." The buried forest of the carboniferous period furnishes the vast and wealth-producing coal. The quartz of an earlier period yields up its stores of yellow gold; and the tiny coral insect of our own time builds slowly, but surely, ever upwards, the foundations of reefs and islands, to which the drifting weed, the wandering sea bird, the dead and stranded fish, and empty shell, all lend their aid in making "habitable land." At length wave-borne cocoa-nuts and other tropic seeds arrive, germinate, take vigorous root, and soon wave their feathery foliage in the fresh sea breeze. Thus, all-bounteous Nature works ever for the good of man.

A RAMBLE AMONG THE CRIM TARTARS BEYOND THE SEAT OF WAR.

By W. B. Lord, Royal Artillery.

UNSURPASSED in picturesque beauty as these charming grottos and fairy-like nooks are, an additional charm is lent to the whole by the quaint magnificence of the castellated palace to which they belong. Standing, as it does, almost on the "border lands" of Europe and Asia, architectural beauties have been gleaned from each; and as we see at times, in passing from the plains to the mountains, some well-known plant or tree growing beyond its usual limit, so the graceful minarets, pointed pinnacles, and gilded domes of Moorish order and true Oriental beauty are associated with the massive walls, grim, frowning battlements, and deep, heavy archways of the Western world; and we are somewhat perplexed, and scarcely know for the moment whether the whole is not a page out of the "Arabian Nights' Entertainments," and that we are not in the neighbourhood of Bagdad, and likely to run against a turbaned caliph at some unexpected corner, or if, perchance, after all, we are not in some Highland chieftain's stronghold, and about to be greeted by a "skirl" from Donald's pipes. Still, our very perplexity has a charm about it, and we wander on amongst the pomegranates, olives, and flowering acacia-trees. The soft cooing of the hoopoes, as, with elevated crest and curved beak, they turn the fallen leaves over in search of worms and insect prey; the tinkling of the rills amongst the rocks; and the sharp "churr, churr" of the large ash-coloured shrike, as he sits on some bare thorn twig, break the silence, and call us back from waking dreams to life's realities, and lead us to reflect on the vast sums in "silver roubles" it must have cost Prince Woronzoff to surround himself with so much that is beautiful.

And here we cannot refrain from relating a freak of true Russian magnificence indulged in by the prince in his younger days. When in command of the Russian army of occupation, which, it will be remembered, remained in France after the Peace of 1815, he was informed, when about quitting that country, that a number of his officers had fallen heavily into debt, from their gay habits and the expensive society in which they had mixed, and were leaving without paying any one. He immediately directed an officer he could trust to collect all the outstanding bills, paid them out of his private purse, and burned the receipts; an example, it is to be apprehended, few commanding officers of the present day are likely to follow.

Our onward march now leads for some distance by orchards and vineyards, pass more Tartar huts, and through the village of Gaspra, with its cool, clear fountains and patriarchal walnut-trees, under the shadow of which sit groups of villagers making wicker baskets, and scooping out the cylindrical bee-hives, before described, with knives of rather formidable dimensions, and peculiar form. Some, we saw here, were made to fit, as in a sheath, the handle of the riding-whip, leading one to think, after all, that the catching of a Tartar might not prove quite as jocular an affair as is generally supposed. We therefore do not catch one, but proceed peaceably on our way still through the orchards and fruit trees; still among the golden orioles and the turquoise-like roller jays. The bee-eaters, too, appear to have a busy, bustling time of it; and dart hither and thither as if all the bees in the world had to be devoured in a given period, and they had but this one day left to do it in.

The rich fertile belt of land between the high mountains and the seashore, widens out rapidly, and here and there stretches in open tracts and undulating mounds, away towards the hills beyond, on one of which stands a curious record of the past —a mass of huge, piled-up rocks, which, if found on the cloud-capped "Tors" of Cornwall or the wild wastes of Brittany, we should at once pronounce Celtic or Druidical in their origin. How came they here, or who reared them? "Quien Sabe?" * Here they are, at any rate, and appear likely to remain for some time to come.

We are now rapidly nearing the promontory of Aithodor, on the very crown of which, amongst thickets of Oriental juniper and immense arbutus trees, stands the ruin of some ancient Greek temple, on the site of which a monastery appears to have been built, and in turn become a ruin; a few white marble pillars and some fallen stones being all that remain to tell of its past grandeur. Our path still widens out, and is rapidly becoming a plain. Mount Megabi rising boldly up from its very midst. The turf, over which we ride, is soft as velvet, and thousands of flowering plants strew our track. A whole flock of sandpipers rise from almost under our horses' feet, and wheel off, with shrill whistle and sharp wing, towards the sea, which is not far from us. The white gulls and swallow-like terns come hovering over head, wondering, no doubt, at our unceremonious intrusion. Close down by the seashore, backed up by the sheltering cliffs, and amongst splendid trees, stands the palace of "Ourianda;" built by the Emperor Alexander, and inhabited by the dowager Empress of Russia. A most elegant and tasteful retreat it is. One immense hall-like room, with its roof supported on pillars and open to the sea, is charming beyond description. Huge vines, like boa

* Who knows?

constrictors, twine themselves from pillar to pillar; their green leaves fluttering in the sea breeze imparting a delicious sense of freshness and purity. The floor of tesselated pavement, cool as marble, has a clear fountain in its centre, from which liliputian canals are conducted through the apartment in every direction, adding the charm of ever-running water to its other delightful attractions. Whole suites of apartments are there, too, with polished oak floors; to walk in safety over which a faithful study of the art of skating, one would be disposed to think an imperative necessity. But we step short in our heavily spurred riding-boots, as if in the act of crossing some frozen pool; and we accompany the white-bearded old major-domo through gallery and corridor, and from room to room, until a small mysterious apartment is reached, and we are sorely puzzled as to the purposes for which it could have been constructed. Unpleasant suspicions arise, and old stories, not the less unpleasant for their age, are recalled to our memory, as we see a small furnace and whole rows of pigeon-holes, evidently for the heating and reception of instruments of some kind. Horrid thought, are we in the chamber of torture? and is this the chief tormentor's dread establishment? Yet the handsome mirrors and luxuriant seats negative the supposition. We are fairly posed, puzzled, and perplexed, and endeavour to seek information of our long-coated and obsequious guide, whose knowledge of English is even more limited than ours of Russian, which is saying a great deal. Pantomime goes a long way in such cases; and what with gestures indicative of astonishment, and asking in our very best Russ, "What for?" a light appeared, at last, to break on the faculties of our friend, whose flat, Mongolian face brightened up like the sun through a cloud. He spread his voluminous skirts out, and minced, on the very tips of his long-booted toes, down the room and back again, after the manner of a Lady of High Degree, when caricatured by persons of his class; twirled his straggling grey locks, cork-screw fashion, round his finger; made imaginary tongs with the digits of his other hand; sank, with mock grace, into a seat opposite a looking-glass; and the whole thrilling mystery was at an end: all is explained. We are in the bureau of the "court barber," and here he wielded his curling-irons in high and exacting majesty. The family being at St. Petersburg, we escape the barber; and after a sight of the gardens, in which there are some unusually large fig-trees, we resume our journey, and are soon away on the smooth velvet turf again, with the sea, on our right, calm and tideless as an inland lake. Evening is closing in rapidly, and we look out for an eligible spot on which to encamp for the night. Water is, by no means, as plenty here as in the boulder-land which we have left behind us. At last, beneath a solitary clump of aspen-trees, we discover a well, into which several plump, active, green frogs leap head foremost on our approach; whilst others, from amongst the tufted grass and water plants, croak forth their evening song as the sun goes down.

This quiet, pleasant nook beneath the aspens is soon alive with bustle and activity. Tent unpacking, picket-pins driving, "off saddling," and general preparations for spending the night, in full operation. We select a tree rather apart from the rest for the sacrifice, remove the leather cover from the head of our keen, long-handled American axe, measure our distance, and send its heavy blade up to the very eye in the soft, white wood, sending the chips off right and left, until with a splitting crash the tree comes sweeping to the earth, and is soon food for the flames, which flicker and dance up cheerfully in the gathering twilight; and as the night closes in we see that there are others afoot besides ourselves: lights pass to and fro some distance out to sea, shine out, flicker brightly, disappear, and again throw forth their lurid light in a fresh place; so we go down to the beach to investigate, and find a whole party of Tartars, torch and harpoon in hand, fish spearing.

The sand in many places runs in flat "spits" and tongue-like deposits far out beyond the strand, and on these, with flaring brands and poised spears, our Tartar friends were wading in search of such "thorn-backed turbots," or small sturgeons, as good fortune might bring beneath the glance of their peering, downcast eyes. Large quantities of the former fish are also captured on the coast by hook and line, when semi-circular "pounds" are built of stones and large pebbles, into which the fish are turned, as sheep are in a pen, and when required for use the fishermen wade in with a boat paddle and literally hunt as many as they want to the shore, when by a dexterous lift or so with its flat blade, the astonished and bewildered victims are pitched out high and dry on the sand. After watching this wild and savage-looking band of fish-hunters, listening to their shrill cries and whoops, purchasing a turbot nearly as large as a moderate-sized tea-tray for the value of about tenpence, and getting thoroughly wet in bringing him on shore, we wend our way back to camp with our fish, with whom we have some serious misunderstandings on the road, but a couple of admonitory raps on the head settle matters at last, and we are soon beneath our our own trees and in our own tent once more. To-morrow we intend visiting Yalta to purchase corn for our animals, as well as certain creature comforts for ourselves. A description of our search, for grain and what befel it and us, we shall communicate in our next.

IN SEARCH OF A CLIMATE.*

SINCE our last number was published a campaign, of which we hardly yet know the details, and of which we are yet to learn the effect, has been lost and won. Sufficient blood of complacent subjects has been fratricidally shed, it may be by previous concert, to satisfy the honour of absolutist monarchs, and to pave the way for what the bureaucrats will call "studious re-examinations" or "pacific solutions." The downcast innkeepers, whose best chance then was that some spoil of war and wages of blood might in part compensate them for war-taxation and the absence of *Milord* and his following, now think that the travelling multitude may yet appear to them in the course of the autumn. Those wish-engendered thoughts we can hardly share, if, indeed, we sympathize with them; for though, in 1795, when Pichegru and the army of the Directory were hammering at the gates of Ehrenbreitstein, it suited the famous Mrs. Ann Radcliffe to undertake a German tour, after the labours of publishing her successful "Mysteries of Udolpho," we imagine that the English matron of to-day will scarcely court such scant amenities as our country-folk may expect from the successful and inflated Prussians. In our own opinion, the Continent—or so much of it as is represented by all Germany, Lombardo-Venetia, and Piedmont—will, for many reasons, be intolerable this autumn (should even peace be maintained) to all travellers not in search of profit or adventure. Our wealthy neighbours who can pay for the "rest and repose," or the "change of air," which, according to their several views, is afforded to them by a continental scamper, will, we are sure, be of our opinion, and to such the advent of a new pioneer is certainly most opportune.

Let us offer sympathy, then, to the authors whose handbooks to the Spas and Bäder and Brunnen will pine this year upon the shelves, and accredit warmly to a section of the pleasure-seeking public (for whose use in truth it was never written), the work of a learned and volatile expert, who, in his 450 pages, exhausts for us Mentone and the Riviera, skims along the Italian coast, sips of Corsica, swoops upon Sicily, flutters over Biarritz, kisses fondly the Italian lakes, and, homeward-bound—for the summer only—shakes indignantly from his shoes the snow of the Simplon, thankful to have passed its Alpine horrors in hygienic safety. "Euns rediensque gaudet" is his fanciful motto; a swallow his crest; and many, we foresee, must in time be induced, and, under Providence, permitted, to follow the system and example set forth in his genial writings. This we are bound to say seriously; for here is no unpractical preacher, no blind guide, no immoveable signpost; but a man of science and a sufferer, who has formed, by experiment upon himself and for his own benefit, a code of health-rules and a system of health-travelling, which have notoriously been of supreme advantage to himself and those to whom his condition was once a matter of grave solicitude.

> "Now that rest and the mild Southern winters have in a measure restored me to health, I am desirous to make the Riviera, and especially Mentone, known to the tribe of sufferers obliged to fly from England, 'merrie' in winter to only the hale and strong who can defy and enjoy the cutting winds, the rain, the snow, and the frost of a Northern land."

Such is his text; and we shall help the good cause of the preacher, and, we hope, amuse some who need no advice, if we follow awhile his footsteps.

Twenty-two miles from Nice, to which there is "through" railway communication, lies Mentone, capital of the lately-annexed principality of Monaco. An able-bodied traveller may gallop there from London (523 miles) in forty-five hours, or less; an invalid should proceed, according to Dr. Bennet and common sense, in the totally different method set out in the Appendix. The town is on a bay four miles wide, landlocked by the extreme spurs of the Maritime Alps. Its salubrity is not derived from latitude alone, but from the protection on the north and east afforded by this chain. Its inner line of defence against the pernicious *Mistral* is formed by hills of from 500 to 1,500 feet, rising to an amphitheatre of from 3,000 to 4,000 feet altitude. Twenty or thirty miles in advance, again, is the main range of the Maritime Alps, effectively obstructing or diverting every variation of northerly wind, and giving an immunity from the bitter cold engendered on the continent of Europe. Here, on warm terraces, protected from all winds but the south, winter may be said not to exist. The lively lizard never hybernates, the swallow never migrates, and you must reach the latitude of Palermo, six degrees farther south, before you can again find lemons growing in full perfection and in open air like apples in an English orchard. It is during winter, of course, that such a climate is especially valuable to the rheumatic, the phthisical, and the general valetudinarian tribe. For them, like Ventnor and the Undercliff of the Isle of Wight, Mentone is rendered unpleasantly hot, if not unwholesome, in August and September, by the shelter of those ramparts that are a blessing in winter-time. Those invalids to whom fortune permits two homes, and who would follow our author's advice, should dally on the way rather than reach the town before the 20th of October, and they may safely, it would seem, follow his custom and venture northwards on the 20th of April. During a Mentone winter there is no fog, at sea or on land, day or night, morning or evening; and such is the power of the sun,

* *Winter in the South of Europe.* By J. Henry Bennet, M.D. (John Churchill & Sons.)

the rocky character of the soil, and the general quality of the air, that washed linen dries always and quickly out of doors, except on the very few days when rain falls or the sky is obscured. Yet even fair Mentone has a skeleton in her house. "The little cloud" that bears the germ of future trouble has been detected on her horizon by the medical seer. The spectre of bad drainage rises even in an air laden with the perfume of a thousand flowers, and unless her inhabitants wisely look to it, the black mark of typhus may some day sully her now unspotted health-certificate.

But although, as the author says, "the search after an unimpeachable climate is in some respects —like that for the philosopher's stone, for the elixir of life, or for the quadrature of the circle—a fruitless one," his fate, it seems, is to pursue it. In 1860 he crossed the Mont Cenis; found Genoa hygienically wanting; flouted Pisa and its ditch-like Arno; found no rest in Florence or the Eternal City; from the like point of view, utterly condemned the fair, yet ill-savoured, Naples; and at last returned to the Riviera from his sanitary survey, a more enlightened and contented man, but with the thirst for new well-springs of health yet unappeased. So, after many days, he sought the island-cradle of the Buonapartes, whose mountain-peaks had fitfully revealed themselves to him at early dawn, though from one hundred to one hundred and thirty miles from Mentone. The chapter upon Corsica is perhaps one of the most interesting in the book. It could hardly indeed be otherwise; for, irrespective of the natural beauties of the island and the romance of its history, its associations with the Imperial family are so deeply rooted that no observer, having our tourist's facilities, can fail to collect rich store of gossip and information charming alike the cursory and the student reader.

In Ajaccio he was pleased to find a thoroughly recommendable winter sanitarium. It is unquestionably one of the most lovely spots in Europe: cleanly, well built, airily planned, and well provisioned. It offers society and good medical treatment, while the name of the great Emperor—no longer a word of terror and abhorrence to the Briton—hangs ever about it as a spell and a mysterious charm. Its grain of bitterness is unquestionably the backward civilization of its Highland-Italian populace. The atrocious institution of their Vendetta in its widest sense, has, it is true, been modified by the total disarmament of the island, and by a rigorous application of the "*Loi du Recel*," which enables the administration to seize and imprison a family, or even a clan, as hostages for the good behaviour or, as they prefer it, for the self-expatriation of a turbulent individual. But the ferocity engendered of this custom is not to be extirpated with the custom itself, and adventures occurred to the author which he has very amusingly detailed, but which tend to show that, whatever its depths may be, the surface of Corsican society is by no means unruffled.

Immediately before the enactment of the *Loi du Recel* a terrible state of things existed; for, according to a French prefect—

"4,300 assassinations occurred in Corsica, between the years 1821 and 1852, in a population of 250,000. In the last two years of this period, the number was 319. The peasant scarcely cultivated his field, for fear of being shot at the plough; and his life was often passed in tracking or avoiding a foe. The women, bred up in a savage sense of honour, urged their husbands and sons to these deeds of bloodthirsty revenge; sang wild songs of triumph over them, if victorious, and equally wild lamentations if they were killed. Many Corsicans, in those days, spent years of their life barricaded in their houses, which they durst not leave. I made, myself, the acquaintance of a gentleman, one of the leading proprietors of the island, who, a long while ago, actually lived for two years barricaded in the upper flat of a house in that town to avoid the Vendetta. An iron door on the staircase, through which he could shoot any one approaching, protected and separated him from relentless foes."

At the commencement of the present century, there were 1,000 assassins sheltered in the mountain fastnesses of the island. The commandant of Ajaccio told the author that, in 1855, there were still 300. The very vigorous measures of the Government are, however, beginning to tell thoroughly. Security reigns; and although the French officials regard appointment to Corsica as banishment, and the French public hold the island to be semi-barbarous, Dr. Bennet complacently feels persuaded that her isolation must end, and he uses his good offices, recommending that a few brigades of invalids should initiate the *rapprochement*. Be it so, and let the good physician lead the expedition, but we will none of it. "Servantgalism" in England is bad enough, in America far worse; but that of Corsica is fearsome for an athlete, and agony for an invalid to contemplate. Such a prejudice may be fallacious, and contrasted with the amiable enthusiasm of our author may seem mean; yet we must confess we hold to it until otherwise advised.

In the winter of 1862, our pilgrim of Hygeia went forth again upon his mission, and investigated Sicily. He glanced, on the road, at Naples and Pompeii, where he was fortunate enough to see the now famous plaster group, termed the "Inpronti umani;" the ashy moulds for which, formed at the great eruption upon the actual bodies of fugitives, were found in an available state for the use of the curators. How available, indeed, we were not aware until we read the following passage, which appears to us worth quoting:—

"Every muscular contortion, every detail of shape is distinctly brought out in this vivid, ghastly group. I also saw a recently discovered subterranean channel, some four feet wide and two deep, in which a considerable body of cool, pellucid water was running rapidly to the sea. A few feet only of the roof had been taken off, and I looked down with interest on this stream of pure water, collected from the adjoining mountains, more than eighteen centuries ago, for the use of the town; and which, during all that period, has been running unseen, hidden in the bosom of the earth, buried with the city it was intended to supply."

The result of the survey of Palermo was a conviction that its climate, being unprotected northward, is as warm, but no more so, than that of

Mentone and the Riviera. It is somewhat moist and relaxing; and though of value to highly nervous, excitable, impressionable constitutions, that are too much braced and stimulated by the dry, tonic atmosphere of the Riviera, it cannot be so beneficial as the latter in the earlier and curable stages of phthisis. The doctor's review of Sicily, birthplace of mythology, extends to considerable length; and though it be as interestingly treated as is, we may fairly say, every division of his subject, we can revel but little more in condensing or quoting. His general conclusion seems to have been that, with the exception, perhaps, of his new-found station of Ajaccio, Mentone might hold her own as queen of Sanitaria against all competitors; and we must thus, too, dismiss the interesting pages given to the lakes of Como, Maggiore, Orta, and Iseo. But we cannot help despoiling the chapter on Biarritz, the pet resort of their majesties of France, and superior in health-value to our Ventnor, Bournemouth, and Torquay. The time comes round for the annual crop of letters to all editors, from "Indignans," "Vindex," "Public Decency," and "Paterfamilias" (the irrepressible and omnipresent), about bathing at watering-places. Mayors and councils and local boards of government are apt to get fussy just now about muzzling dogs and secluding bath machines; and to such of the public as have not seen the admirable pictorial sketches of French bathing, published last year in Paris, we must offer our condensation of a written one. The passage is long; but while there are many whom it may amuse, there are some whom it concerns to know a system which, whether better or worse than our own, prevails elsewhere:—

"Both ladies and gentlemen wear a bathing costume. That of the former consists of loose, black woollen drawers, which descend to the ankles, and of a black blouse or tunic descending below the knees, and fastened at the waist by a leathern girdle. All seem totally indifferent, and pass smilingly before their friends and the spectators, appearing to enjoy every stage of the performance. The gentlemen's dress is a kind of sailor's costume; and as custom gives them more latitude with respect to colour, material, and make, great varieties are observed. The exquisites seem to take a pride in showing themselves off thus prepared for their marine gymnastics. I have often seen them—cap in hand, feet and ankles naked—talking to their lady friends sitting around, previous to taking their first plunge. Once in the water, all the bathers mingle together. The utmost decorum, however, prevails: the husband assists his wife, the father his younger daughters; but strangers keep at a respectable distance in the water, *as they would on dry land*. At first this aquatic mingling of the bathers strikes the English beholder as an infringement of the laws of propriety and decorum; but a more close scrutiny brings the conviction that such is really not the case—indeed, that the mode of bathing is infinitely more decorous and decent than that which is pursued on our own shores. The bathers are to all intents and purposes dressed; and there is, in reality, no more impropriety in their witnessing each other's marine sports, than there is in the members of a masquerade mingling in the streets during the carnival at Rome or Naples."

Some time ago, in view of foreign complications, the editor of the *Times* addressed to persons about to travel a graceful plea for Ireland. Likening the autumnal swarm of English tourists to a fertilizing inundation, he expressed a hope that at least a portion of it might now find an outlet among the lovely scenes, the venerable antiquities, and the stirring associations of the sister island. Our brief digression to echo the kindly wish needs no excuse, and we return to our hygienic traveller for a few lines only. These are, to our thinking, necessary to point his moral; and the unhappily numerous class who have more than a fugitive interest in the subject will, we make sure, recognize their value. The following authoritative passage on the misuse of travel has, our experience tells us, a sad significance:—

"I have infinitely more confidence in, and reliance on, the value of a winter residence in the South, than I had six years ago, when I first left England for the winter, a confirmed invalid. As a practising physician in London, I had not seen the good results from wintering abroad that I have since experienced and witnessed at Mentone. The explanation, however, to me is obvious. Four out of five of my former patients and friends evidently committed all kinds of mistakes, against which, from want of experience, I could not guard them as I can now. They travelled about for pleasure when they ought to have considered themselves delicate invalids on the brink of the grave, and to have remained stationary. They lived in large, dirty, fever-poisoned southern towns, more occupied in sight-seeing than in health-seeking, and constantly exposed to many pernicious influences. Is it extraordinary that they should often have come back as bad, or worse, than when they started?"

They left all in fact to "climate," as thousands who are quitting London, while we publish these remarks, will leave to "change of air" the task of repairing, without their help, the loss their lives have undergone by the friction of a twelvemonth's exertion in trades, professions, and fashionable pursuits. Poor "change of air," in truth, is an honest beast of burthen; and sadly put upon by many of those who profess to be among its most fervent friends. And now, having made our way back to the land of Cocagne and its denizens, we may fairly lay down our pleasant task, merely repeating that this is not only a medical treatise, but also a traveller's note-book, entitled to rank with the pleasant works of Matthews, Head, and the Halls. We have found most seasonable diversion on a short holiday stroll, in its chapters devoted to the Geology, Physical Geography, Meteorology, Natural History, Antiquities, and Social Life of the Mediterranean Sanatoria. So exuberant, indeed, is the author, that he could not pass the Italian lakes without a pleasant treatise on angling, and a "fancy free" digression to Scotland and her lochs. Fascinated by his performance, which is a prominent instance of the grave and gay in unity, and impressed with its value as a contribution to knowledge upon a topic of absorbing interest in many an English home, we feel conscientiously at liberty to commend it to both lay and professional readers.

ON SKETCHING FROM NATURE.

By Aaron Penley, Professor of Landscape Painting at the Royal Military Academy, Woolwich.

No. III.

IT is my intention to vary my scenes from month to month, so that I may present to your readers—at any rate to that portion of them to whom drawing is a delight—every class of object with which they are familiar.

The two previous drawings were strictly mountainous in character. I have now introduced one with trees of some size, and continued, in a slight degree, the practice of the former distances. I have also had regard to the singleness of subject, if I may use the term, in the hope of inducing many to seek out the like during the season for working out of doors. There are so many failures, attended by perplexity and disappointment, in the attempt to portray scenes of a difficult description, that I am desirous of leading the beginner to those of a simple kind; so that, when he has had practice in such, he may exercise his pencil upon subjects of greater combinations and importance. Success is always encouraging; failures invariably depressing. The former can only be attained when the ability is equal to the task; the latter is a sure evidence of incompetent skill. It is much more prudent to undertake too little than too much; because there is real pleasure in the pursuit of any accomplishment where the powers are not overtaxed, and where we are influenced by confidence in the place of fear. To the sketcher, Confidence is truly necessary; for, with this feeling, there will be both freedom and decision of touch, a clear and well-formed outline, a judicious arrangement of light and shade, and a perception of colour that will be in accordance with the landscape under treatment. Where the mind can fully comprehend the matter, a little patience and care will most assuredly carry out the work most satisfactorily. But if the matter is beyond the mind, then it is advisable never to hazard subjecting the latter to perplexity and disappointment. I have dwelt upon this at some length, knowing the folly of aiming at difficult subjects; and shall make a point, from time to time, of repeating the caution.

The present drawing is of simple materials;—sky, mountain, water, a hill-side, a flat tract of middle distance and foreground, with a group of trees to the left, and a few stones bounding the water-course to the right. In making the sketch, the water-line should be the first drawn; then the line for the middle distance below it, and the particular rising angle of the hill-side. After these, draw the central mountain, carefully noticing its incidence upon the hill-side, and the precise position of its greatest elevation. This must be found by an imaginary perpendicular line from it to the water; which line, in this instance, falls just upon the point whence the hill-side rises from the valley. This practice is the only true method of finding the relative points of the several objects, and will prevent their being placed too far on either side. Of course, comparing by means of imaginary horizontal lines will insure the relative height of each object. The dark line at the further end of the foreground is now to be given; and the curvatures of the road, pathway, and water-course on the right. Now, raise the stem of the nearest tree, and the exact position of its neighbours. In groups of this kind, the most perpendicular stem should always be drawn first; and then the direction of those near to it can easily be settled by the indication of a dot below, and another at the proper distance above, and also at any part where there is a change of angle. This done, the outline can readily be filled in without hesitation. Attention in this respect will save much time. The stems being sketched in, the foliage can be placed with great truthfulness, and will appear to have a proper support.

Trees are felt to be very difficult to the amateur. "I cannot draw a tree," is constantly sounding in my ears; and this arises from a want of appreciation of the construction of stems, limbs, and foliage. There is considerable arrangement in the clusters of branches, not only as affecting the outside of the tree, but also its interior; and it is upon a just perception of the chief of them that the general character of form will depend. When trees occupy a conspicuous position, it is imperative that their forms should be gracefully drawn, so that they may recommend themselves to the spectator. Otherwise, they fail to give interest or excite pleasure. It is, therefore, to the outside foliage and to the graceful curvature of lines—noting whence the foliage proceeds—that we must direct especial attention; afterwards filling in the clusters of hanging boughs in front of the stems. If this be well done, an agreeable effect will be produced; but if not, clusters or solid masses of impossible forms are very likely to present themselves. Of course, every tree has a peculiar growth of its own, a knowledge of which can only be gained by drawing it from nature, with the full determination to study its individual character, both of stem and foliage.

In the treatment of Grass there is also a general failure, and this I attribute to the same non-appreciation of form that we find in regard to foliage. Nothing conduces more to the effect of a picture than a pleasing distribution of patches of grass in the foreground. The colour they bear, in contrast to the ground whence they spring, naturally gives very decided features of form, and as these

are so immediately in the front, they produce the greatest influence upon the eye, either for an agreeable impression or otherwise. An artist is so well aware of this fact, that he is often put to much trouble before he can produce a satisfactory arrangement; and not until he has done this, is he inclined to turn his attention to other portions of the work. In the accompanying drawing there is much practice of the kind, and it will be seen that, not only do the forms or direction of lines of grass undulate naturally, but that the several masses are also of different quantities and considerably varied in tone of colour. It is upon the outside lines of the grass that the forms of the road, the path, and the water-course depend; so that here is another reason (and a very important one) for giving study and careful drawing to this part of the sketch.

The detached bits of Stone are, in their turn, useful, by position, to direct the eye to the sides and centre; and this they do by assuming a crescent-like form round the foreground. The upright figure repeats the perpendicular lines of the trees.

There is but little actual light in the drawing, the general impression being that of half-tone, and the only positive dark is upon the figure, which, from its blue, red, and brown drapery, imparts a mildness of tint to all around. The highest or brightest yellow light is upon the centre of the distant vale, while the light stone to the left under the tree and those by the water-course to the right invite attention to the entire foreground. I will only add, that where there is an absence of deep and powerful shadows, great judgment must of necessity be applied to balancing the warm and cool tints; and to this the tyro cannot too soon direct his attention.

The colours employed were, for the—

Sky—Cobalt.

Clouds—Sepia, cobalt, and a little lake.

Mountains—Cobalt, lake; yellow ochre, with a glazing of gamboge and raw sienna on the yellow part, raw sienna and lake on the red; and terre verte on the green parts.

Middle Distance—Raw sienna and yellow ochre for a first wash. Cobalt, lake, and raw sienna for the markings. Raw sienna and lake for the spaces between; for the highest light, gamboge and lemon-yellow.

Trees and Grass—Gamboge, bright sienna, and indigo: a little sepia introduced for the dark shadows. A glazing of terre verte on parts of the greener tones.

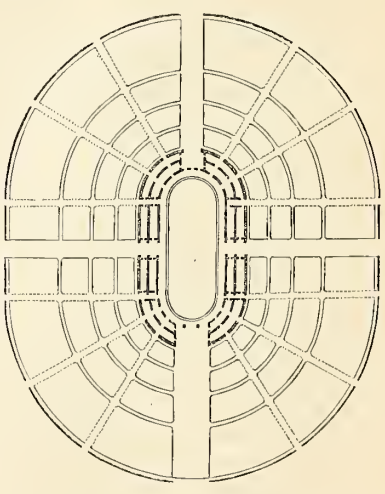
Stems and Shadows of Road and Stones—Sepia, lake, indigo.

Light Tint of Road—Yellow ochre, lake, sepia.

THE PARIS EXHIBITION, 1867.

THE works of the Universal Exhibition Building are beginning to make a most imposing appearance, and the plan of the whole is now distinctly visible. But it is necessary that our readers should, at the outset, clearly understand the form and arrangement of the compound structure, which is to contain the collection of choice samples of the art and industry, not only of the present time, but of past ages of the world. The plan of the Exhibition building is of irregular ovoidal form. If you were to take a ring and press two of the sides together until you have reduced the diameter in one direction to about three-quarters of that of the other, you would have nearly the figure of the outline of the building. It consists, in fact, of a very short body with semi-circular ends. But a simple diagram will best show, not only the general form, but also the internal arrangements.

The length of the building is about 1,600 feet, and the width nearly 1,250. Figures alone, however, do not always give a sufficent idea of extent; and it will be well to compare the new building with another devoted to the same purposes: namely, that of the Exhibition of 1862, at South Kensington. The length of the principal front of the latter building was 1,150 feet; so that the Paris building will be wider than the other was long, and longer by about 450 feet, or considerably more than one-third. The great nave of the Exhibition of 1862 was eight hundred feet long; the great central



avenue of the building now erecting in Paris will, with the garden in the centre, be double that length; and the great transverse avenue more than half as long again as the great nave of the

South Kensington building. The double dotted lines, radiating from the centre, represent secondary avenues or passages for the public. It should be mentioned that the avenue leading from the chief entrance, which is at the lower end of our diagram, is made wider than the other avenues, in order to allow for grand effects in that portion of the building. These avenues supply the means of direct ingress and egress to and from all parts of the building, and are therefore arranged radially as described. The courts, or galleries as they are called—the new building possessing the immense advantage of being entirely on one floor, and therefore having no staircases and no dark shadows from upper floors—are arranged in rings or zones, as seen in the diagram. In the centre is a garden, with an open colonnade all round it, which will supply an agreeable retreat from the crowded galleries at times when old Sol regards weak mortals with too much fervour.

The first small zone or gallery, that which immediately surrounds the central garden, is to be devoted to the History of Workmanship; in fact, a retrospective museum of the art manufacture of all nations, from the earliest times to the past century. The second gallery, of considerably larger proportions, is to contain works of fine art, painting, sculpture, engraving, architecture. Next to this, again, is a smaller gallery, for the exhibition of the materials and practical applications of art; in short, all that appertains to the fine arts in any way. These three galleries form one portion of the building, and their walls are of solid stone, in order to exclude as far as possible the dust and noise, which are almost inevitable where large crowds are collected. A considerable portion of these walls is erected, and the forms of the galleries are now clearly marked out.

The next three, or "Intermediate galleries," as they are called, are to be devoted to the exhibition of raw materials and ordinary manufactures of all kinds. Two of these are constructed of cast iron, and present no special features.

Lastly, we arrive at the great outer zone, the machinery court, or great nave as it is called, in which are to be exhibited, not only the machinery, but processes of all kinds, whether aided by mechanism or dependent solely on the fingers of the workmen. We have explained the views of the Imperial Commission on this head, in our previous article in the first number of NATURE AND ART; we will now attempt to convey some notion of this grand feature of the Exhibition building. The outer wall of the great nave will form the exterior of the building, and will conceal all the inner galleries from view. This stupendous hall of industry will be 107 feet wide, 82 feet high, and 4,500 feet, or about four-fifths of a mile, in length. In order, as before, to have the benefit of comparison, we may state that the principal nave of the Exhibition building of 1862 was 85 feet wide, 100 feet high, and 800 feet long. The superficial area of the floor of the former will be rather more than seven times that of the latter.

This great nave, with its lateral galleries, of which we shall speak lower down, is being erected in three sections, simultaneously, by different contractors. In consequence of the immense size of this portion of the building, the engineers who designed it wisely determined to construct it of wrought iron; and every portion of the pillars, roof girders, in fact, all the parts, with the single exception of the window-frames, are made of iron plates riveted together like those of a steam-boiler.

The great pillars are rectangular, about eighty-five feet high, and two feet by four at their broadest part. They are prepared in the workshops of the contractors, one of whom brings them on to the ground all complete, while the others convey them there in three sections, which are riveted together on the spot. The foundation for each of these pillars is carefully prepared beforehand; an iron shoe of the form of the base of the pillar being firmly secured by masonry set in concrete; the pillar is then raised by means of a crab or windlass, and, when erect, its foot is securely bolted to the shoe in which it is to stand for the next two years at least. There will be eighty-six pairs of these gigantic pillars, each pair being connected by a great curved girder, and by a pair of tie-rods above, which, in their places, look like threads stretched across from pillar to pillar, but which are in fact 110 feet long, and nearly as thick as a man's wrist. When finished, there will be nothing between the floor of this grand gallery and its curved roof. The roof is covered with stout corrugated iron plates, the waves being about twice as wide and deep as in ordinary corrugated iron, and is unpierced, the nave being lighted from the sides. The whole of the upper portion of the spaces between the columns will be filled with light iron window-frames, so that there will be a complete clerestory all round, both on the inner and outer side of the nave. The upper ends of the pillars will be masked by iron or wood work forming a running frieze all round the outside and decorated with slight ornaments, but the building will not present any great architectural effect; it will be simple in appearance and in good keeping with the object for which it is intended.

In order not to interfere with the description of the great Machinery Court or nave, we have purposely avoided above any special mention of the lateral portions of this zone or section of the building, but they are extremely important parts of the structure itself, and one of them will form a very interesting feature as regards both the appearance of the building and the convenience of the public. Beyond the great Machinery Court, and outside the outline given in our woodcut, is a series of small pillars supporting lattice girders, with large brackets in all the angles; there are two of these small pillars to each of the great pillars. The whole of this portion is also of wrought iron, and its great object is to give support to the main building and relieve the girders and tie-rods above from a portion of the enormous strain which would otherwise fall upon them; this small outer gallery represents, in fact, the flying buttresses in a Gothic building.

The space between the gigantic pillars of the great nave and the Liliputian pillars of these flying buttresses is to form the Alimentary Court, which will include not only articles of food of all kinds, whether in a raw, preserved, or prepared condition, but also cooked foods, drinks, tobacco, and other matters. This gallery will form, in fact, an arcade all round the building, in which the exhibiting nations, each in its own section, may not only show, but also sell, whatever man eats, drinks, or smokes: here, then, will be the restaurants, cafés, taverns, eating-houses, pastry-cooks' shops, wine- and beer-counters, and luncheon-bars, of all Europe, perhaps of Asia and Africa, and almost certainly of America and Australia. Beneath this portion is a range of cellaring nearly a mile in length and about thirty feet wide. The occupants of the Food Court will be charged a fixed sum per mètre for rent, and will, of course, have to fit up their own establishments. One of the rules laid down by the Imperial Commission will give a certain character to this part of the Exhibition. Each nation will be strictly confined not only to the sale of articles used by its people, but also to its own proper methods of preparation and cooking. Gourmets are already talking of courses of comparative eating and drinking, and critical essays on all the various modes of culinary chemistry.

The ends of the lattice girders already alluded to stretch out into space, as if trying to find a bracket or pillar upon which to rest their arms: no such resting-place is to be provided for them—they are not only to remain thus extended and unsupported themselves till the end of exhibition-time, but they are to give support to an iron or other roof, and to form, in short, what is called in France a *marquise*, and thus supply a covered promenade around the whole building. This terrace will be more than twenty-two feet in width, and will lead, by a gentle slope, to the surrounding grounds or *parc* of the Exhibition. The shops and restaurants at the back will be upwards of thirty feet deep.

During the last few weeks there has been an uneasy feeling floating about that the war in the centre of Europe would cause the adjournment of the Exhibition until the year 1868; this feeling was partially removed by the fact that Austria formally announced, at the beginning of July, that, in spite of the war, her contributions and arrangements would all be ready in good time. Events which have happened since, and the assurances of other countries, have aided in allaying all apprehension; the Papal government, for instance, has announced that the Pontifical frigate *Immaculata Concezione* is ordered to be ready to convey all the contributions from the Roman States without charge to France.

The assurances given and the measures taken by the French Imperial authorities in connection with the Exhibition leave no doubt about the intentions of the Commission. In the preliminary article in the June number of Nature and Art mention was made of the extraordinary works in hand for converting the heights of the *Trocadéro* into the grand *Place du Roi de Rome*. A few days since, the Emperor and Empress visited the works in question, which have been ordered to be ready provisionally by the 15th of August, the day of the Imperial fêtes: it is said that the quantity of earth which will have to be excavated and carried away, to carry out this order, will amount to 200,000 cubic mètres; but with the aid of the electric light, so that the work may be carried on by night as well as by day, there is no doubt that it will be accomplished.

Nearly all the special regulations connected with the Exhibition have now been published. As regards the Fine Art portion, the works to be admitted are confined to those executed since the 1st of January, 1855, and which were not exhibited at the Universal Exhibition held in Paris in that year. No copies, even when executed in a manner different from the original, are to be admitted; but this, of course, will not exclude reproductions by engraving, lithography, photography, or other means.

The retrospective museum, or Illustrations of the History of Labour, as it is called officially, promises to be one of the most attractive departments of the coming Exhibition. At page 24 of Nature and Art will be found the heads of the programme of this division as applies to France. The assurances of other countries give promise that the collection of ancient specimens of art-workmanship will be varied as well as numerous. Belgium has appointed a special commission for that section, including the keepers of the public collections of the country; and there is no doubt that the productions of the famous old Flemish art-workmen in the precious metals, iron, ivory, wood, and other materials, will be worthy of the occasion. The Greek Commission has taken similar steps; and although the art-treasures of that country produced since the dark ages cannot cope with those of the Flemings, and there has been, until lately, little care given to the preservation of such objects in the country of the Hellenes, still their style and character are so peculiar that they will present a most interesting contrast. Russia promises also to subscribe largely to this collection of antique works of art. The Patriarch of Jerusalem promises to send some curious contributions. Persia, also, will contribute many interesting specimens of her ancient art. The Viceroy of Egypt, who takes a deep interest in the coming Exhibition, has, it is said, ordered the whole of the contents of the Museum of Boulak, including the ancient jewels discovered at Serapium, and a large collection of specimens of ancient art, arms, trinkets, and antiquities of all kinds, to be sent to Paris.

The ethnological and ethnographical sections, and those relating to the improvement of the physical and moral condition of nations and to their domestic economy, are expected to be well filled. Nearly every country is said to be preparing series of costumes, ancient as well as modern, to be set up on figures, as was seen to a small extent in the Norwegian and other courts of the Exhibition of 1862. Russia, Sweden, Norway, Persia, Greece, and Egypt, all promise contributions to this class.

A large tract of waste land near the Exhibition building has been taken as an Agricultural annexe, and a very considerable portion of this will be devoted to the contributions from Great Britain. In fact, the programme of the Exhibition with respect to this class is so vast that it will be difficult to meet the flood of demands made to the various commissions.

Amongst the curiosities spoken of is a specimen at once of topography and typography to be sent from New York; namely, a plan of that city, 25 feet long by 8 broad, in which not only every street and alley, but also every house, will be distinctly indicated.

That portion of the programme which relates to the illustration of the dramatic, musical, and other elegant arts, and to the amusement of the visitors to the Exhibition, seems likely to be carried out as intended. Engagements have been entered into between the Imperial Commission and three operatic and theatrical managers for the construction of an international theatre in the Exhibition *parc*. The direction of the concerts to be given in this theatre is to be in the hands of M. Carvalho, the director of the *Théâtre Lyrique*, and husband of the charming cantatrice. A dozen other different means of amusement are talked of, but we are not aware that any of them have yet advanced out of the condition of schemes and proposals.

One of the recent additions to the programme is the formation of a special committee for the admission of pleasure-boats and yachts, for the accommodation of which a piece of ground, close to the Exhibition, and with a frontage towards the river, has been devoted. Series of fêtes and regattas will be arranged by the committee, to which the vessels and boats of all nations will be admitted. Yachting and boating, like racing, and, in a less degree, cricketing, are becoming acclimatized in France. Twenty years ago no such thing was known, except at certain ports, where probably the English were chief promoters; and now we are told, on the authority of the Minister of Marine, that there existed in France, in November, 1865, nearly five thousand pleasure-boats and yachts of all dimensions, giving amusement or occupation to nearly six thousand amateurs and regular sailors.

The question of medals and other prizes, and the many considerations which attach to their influence, and the modes of their distribution, is still a vexed one; and every great Exhibition as yet has had a distinct plan of its own. The Imperial Commission has just issued the regulations which have been adopted on that head. The sum to be devoted to the purpose is 800,000 francs, or £32,000. The jury is to consist of six hundred members of all nations. With some exceptions—as for instance, the classes of driving-machinery, food, animals, horticultural products, and the tools and products of hand labour, which can only be judged of after longer experience and trials—the decisions are to be made by the middle of May, and announced on the 1st July, 1867, when the distribution will take place in the old Exhibition building in the Champs Elysées. The plans for this public ceremony have already been sketched out, and considerable importance will be given to the crowning of the laureates of industry and the arts.

In the fine art group, the rewards are to be:—17 grand prizes of 2,000 francs each, 32 first prizes of 800 francs, 44 second prizes of 500 francs, and 46 third prizes of 400 francs each. In the industrial and agricultural groups, the prizes are as follows:—100 gold medals, of the value of 1,000 francs each; 1,000 silver and 3,000 bronze medals; and 5,000 honourable mentions. All the medals are to be of the same form.

A new class of rewards is added to the above. One grand prize of 100,000 francs, and ten other prizes—amounting in the whole to the same sum, divided according to the decisions of the jury—are to be awarded to any persons, establishments, or places, that have, by special organization or institutions, developed good harmony amongst those engaged in industrial pursuits, and thereby ensured to the work-people material, moral, and intellectual advantages. The grand prize in this class will, of course, only be given should any individual or society of persons have performed remarkable services in thus contributing to the welfare of their fellow-men.

THE TUSSEH SILKWORM OF INDIA

(*Antheræa Paphia*).

By W. B. Lord, Royal Artillery.

NEVER perhaps has the subject of silk cultivation in this and other countries attracted so much public attention as it is now doing; and it is to be hoped that the spirited and strenuous efforts now being made to acclimatize the Ailanthus worm (*Bombyx Cynthia*), a description of which was given in the June number of Nature and Art, may be crowned with success. So far we see no reasonable grounds for fear as to the ultimate result; and we confidently hope, in a short time, to see a new element of home industry established, by which employment will be afforded to the aged, the very young, and the afflicted, of our suburban and rural districts. It is our intention to note carefully, from time to time, the progress made and results arrived at in this new, but most desirable, branch of industry. France has, as yet, outstripped us on the march, and is fairly established as a silk-producing country. Hitherto the labours of the mulberry worm have furnished the supply to the

manufacturers, and countless trees were reared and planted out to supply food for the ravenous broods of worms.

How the silkworm-pest, "Gettein," appeared, and swept, like a blight, over the lands of the poor silk-cultivators is too well known to need comment; and it appears probable that both the Ailanthus, and still more hardy Oak worm (*Bombyx Yama-mai*), will ere long spin their webs for the "public weal," both in England and France.

India has, from time immemorial, been a silk-producing country; and there is no doubt that, from the very earliest ages, much attention has been directed to silkworm management.

The ordinary Chinese or mulberry worm, has been long known and extensively reared in many districts. But it is our intention now to deal more particularly with the native Indian silk-worm, his works and mode of life. It is by the natives called "Bughey;" and the *dead leaf* or brown-coloured silk which it spins, is known throughout the length and breadth of India as "Tusseh." This becoming and exceedingly durable silk is rapidly gaining favour amongst the fair members of English society; and Regent Street, that great emporium of fashionable merchandise, possesses, in common with the bazaar of the Eastern world, its piles of rich brown Tusseh, piled bale on bale, as a lure to those who heedlessly trust themselves within the magnetic circle of the shops.

By the inhabitants of India, silk of this description is in almost universal use; and so durable is it, that years of wear are scarcely sufficient to destroy its tough texture. But to all those who possess garments of this, or any other Indian silk, a word of caution may not come amiss. Never subject them to the action of hot water, or their strength and durability soon pass from them, and they rapidly become deteriorated and fragile.

The "Tusseh" worm is found in Bahar, Assam, and Bengal; being very abundant in the neighbourhood of the Beerbhoom Hills, in the latter country. In this and other portions of the presidency, it has been for ages so abundant and unfailing in its supply of raw silk, that the native population are enabled to avail themselves extensively of it for a number of useful purposes. Its food, the leaves of the *Rhamnus Jujuba*,—"byer," "beer," or "bear" berry of the Hindoos,—is found growing wild in every forest and jungle. The Terminalia, Alata, Glabra, or "Asseen," is also eaten freely; so that scarcity of food is a contingency rarely to be feared. And wherever life-giving water can be made to flow, or where, deep beneath the cable-like roots and spreading branches of some huge banyan, the cool well lies hid, there will the water-loving Hindoo ereet his hut, and pass his simple life, cutting and pruning the trees in the neighbourhood of his own home, until the season shall arrive for the young worms to appear amongst the leaves of the forest. For, be it known that our "Tusseh" friend is a veritable vagabond in both his youth and old age, resolutely objecting to be domesticated, and absolutely refusing to rear a family within the pale of civilization. So our dusky worm-hunters betake themselves at early dawn to the *byer-berry* and asseen thickets, and there, with keen searching eye, examine the fallen leaves, flat stones, or pieces of bark, in order to discover the gunpowder-like traces of the young insects, which may chance to be luxuriating amongst the rich green canopy above. The tell-tale signs once discovered, our prying investigator places the soles of his feet against the trunk, and, with a small sharp hatchet in his waist-cloth, walks up the tree in a manner that even Leotard himself would find hard to accomplish. The perforated leaves and busy worms, as with sharp nippers and swaying heads they mow their way amongst the young foliage, are now brought under observation. A few steady, well-directed cuts, serve to detach the branch from the parent trunk; and the whole family of vagrant young worms, branch and all, are passed carefully to the ground. These, with others procured in like manner, are then carried, with much ceremony, many curious religious rites, and an inordinate quantity of *tom-tom* beating, to their future home, near the hut of their captor, who at once places them on the leaves of the asseen-tree to feed. From this time, war of the most determined character is declared against all marauding crows and piratical "mina-birds." * Pellet-bows, stones, and slings, accompanied by noises of the most wild and fiendish character, serve to scare off the feathered prowlers by day; but by night—on leaden wings, in long lines, like some of the strange old-world species long passed away—out flap the bats, who are even more fond of a plump young silkworm than the crows and their hungry companions. So that, what with the howling of the jackals, the screaming of a chance leopard in the distant forest, and the owl-like hootings of the "silk-worm guard," night is made hideous, and sleep an impossibility. The eggs from which the young worms are hatched, generally take from two to four weeks, according to the temperature and state of weather, before the young brood comes forth and makes its appearance. They are deposited by the moth amongst the crevices and rough projecting plates of the bark, to which they are attached by a very glutinous material. This appears to protect them from the attacks of ants and other enemies. Nearly three months are passed in the egg and larva state before the worm begins to spin; and it would be difficult to find amongst all the curious and interesting instances of clever insect architecture which the upturned stone, the displaced bark, or hollow tree discloses, one more wonderful than *the house on a stem* built by the "Tusseh" worm. This, as it will be seen on reference to the accompanying illustration, is of almost oval form, firmly and evenly woven, and hung from one end, much like some forest fruit at the end of a long, tough, horny stalk. This, at its upper end, has a perfect ring made in it, which passes round a twig of suitable size, and

* The mocking-bird of India.

always within a bifurcation of the wood. No other means of attachment could, for simplicity and strength, equal this arrangement; as rough, stormy winds, or other disturbing influences, instead of breaking the stem short off, as would inevitably happen if glued fast, simply move the ring round the stick forward or back as the branches wave.

In this hanging cot the worm remains at rest from October until some time in July, when the moth forces its way out, and, if a male, at once flies off to other and far-off groves, deserting the ladies most rudely. They—good, orderly creatures—quietly remain at home, until, after a short time, perhaps within a few hours, perchance in a day or two, arrive, with much flutter and display of painted wings, a whole troop of gay gallants, who at once establish a domestic circle around them. These gay Lotharios have been reported by the natives as having winged their way from immense distances in their wanderings, proved by certain well-known marks placed on their wings by the inhabitants of distant districts. Whether these restless creatures would select suitable partners if confined to the home-circle, it is hard to say: one thing is certain, with them liberty and flight go hand-in-hand.

The movements of these insects are always most carefully watched by the natives engaged in their management, as good or evil fortune is supposed to result from the early or late arrival of the flights of male moths; and the inevitable "tom-tom," together with instruments rather of torture than music, lend their aid in causing such a din as would frighten any ordinary moth clean out of his wits, and make him forget the ladies altogether.

The female moth rarely lives beyond from eight to twelve days after depositing her eggs, which she generally does very near the cocoon from which she came. During the period of her short life, no food of any description is taken, and no mouth or other orifice through which sustenance could pass exists.

The cocoons are gathered from the trees long before the moth is sufficiently developed to commence its attack on the walls of the sealed-up capsule in which it is imprisoned. Now comes another season of "tomash:" "tom-tom" again, braying of horns, and general production of unearthly noises. Plantain-leaves have to be gathered, dried, packed together, and duly burned. From the ashes, when mixed with water, a "ley" is made, which is then deposited in just such an earthen pot as that in which "Ingoldsby" describes his "convivial imp" triumphantly luxuriating:—

> "A quaint imp sat in an earthen pot,
> In an earthen, big-bellied pot sat he;
> Through holes in the sides his arms stuck out—
> Rather a comical sight to see."

For between two and three hours the cocoons about to be wound are allowed to soak in the mixture contained in this pot. They are then wet, and are so transferred to another vessel, also earthen, and in material closely allied to pot the first. Here they are allowed to remain until sufficiently soft for winding, which they generally are in from four to five days. Flat, shallow dishes are now provided, still earthen, and still of the family of "pot." Into these the softened cocoons are thrown, without water. The terminal threads of four or five cocoons, after having been dexterously unravelled, are carried to the drum of a small primitive-looking reel, built up of four bars of hard wood running through a couple of the hardened knots of a large bamboo cane. The reel is held in the left hand and turned with the right, the threads passing in an oblique direction over the thigh of the spinner, who squats on the ground before his dish of cocoons as if about to indulge in a feast of tempting fruit. By a peculiar species of sleight of hand, a dexterous twist is given to the compound thread as it is wound off, and much skill appears requisite in the operation, to avoid breakages and entanglements. When fitted by after-preparation, the thread is carried to the loom of the country, where the "Tusseh" fabric is produced.

Besides the worm now under notice, there are others which we shall merely give a passing notice of, although their products are valuable and may call for further remark in a future number.

The "Arrindy," or *Palma Christi* worm, feeds exclusively on the leaves of the *Palma Christi*, spins a lighter-coloured silk than the Tusseh; but it cannot be wound, and is therefore carded, and treated much after the manner of cotton. Its strength and tenacity are wonderful. Garments made from it have been known to descend from generation to generation. How fortunate it is that the fashions of the East are not so changeable as those of our own country! What would "Lady Clara" think of being presented at Court in the same dress as that worn by her lamented grandmother when she was young? Shawls, muslins, and other Indian productions are, by the merchants, packed in "Arrindy cloth," as being the strongest and most durable envelope to be found.

There is yet another silk-producing worm, the native name of which I do not remember. This is found living wild amongst the great mango "topes" of Central India, spinning its cocoons either between the forks of some twig, or amongst the thick clustering parasites, which closely resemble the mistletoe of our own orchards and woods. This wild silk is frequently gathered by the inhabitants of the "gaums," or native villages of the interior, for the purpose of mixing with the other kinds, or with a view to the manufacture of bow-strings, sword-loops, bands for the barrels of their matchlocks, and various other odd purposes to which silk is applied in an Eastern country. That India has furnished large quantities of silk to the Western world from periods of the most remote antiquity, history and tradition alike prove; and it has been reasonably questioned whether the immense canopies used for the purpose of covering the ancient Roman theatres were not composed of this material; and, together with the peacocks, gold, and other precious merchandise in which the old-world potentates so much delighted, brought from the distant land of "Ind" to minister to their wants and luxuries.

THE DRAMA AND THE STAGE.

Theatric Art.

If the Drama be not literary or musical, it can scarcely come within the limit of criticism. It is true, indeed, that we talk of Dramatic Art; but it may be doubted if this phrase can be applied justly except to the literary or lyrical portion of stage performances. The stage, as a dumb show, has hardly ever touched the limits of genuine art; and it would be difficult to prove that without literature or music it has ever been more than a raree show. In running over the numerous spectacles, scenery, ballets, pantomimes, and transformations we have witnessed, there can hardly be recollected any that would come within the definition of art. In the time of Stanfield and Roberts as scene painters, there may be recollected scenes and other representations which, in combination of colour and form, and as appealing pictorially, might be supposed to be the result of artistic composition, and to produce the true effect of art. The only two, however, that we can vividly call to mind, were the landscapes in "Acis and Galatea," and the Senate scene in "Coriolanus." In the former, the landscape was so delicately painted, the mechanical effect of the sea flowing and ebbing on the beach, and the exquisite grouping, were so tastefully and harmoniously introduced; it was so perfect a picture that it became artistic, and all idea of the stage medium was lost. Foot-lights, scene-shifters, canvas-daubers, ballet-girls, and stage manager were obliterated. It was nearly the same with the Senate scene in "Coriolanus;" although there was not that scope for landscape painting which the Sicilian scene afforded. The fine heads, classical togas, and massive arrangements of the senators against the stone architecture, produced a fine effect, which was not only illusive but suggestive. The kind of effect may be seen in Gérôme's picture of Phryne, now so famous. By becoming suggestive of more than was actually represented, such stage expositions may become artistic.

Allusion has been made to those past glories of the stage, which occurred about the year 1842-3; because in making an estimate of what is called theatric art, it is necessary to ascertain what the phrase means, and if it may be allowed. If theatric art is to be confined to the means of obtaining effects that will bring down applause in a theatre, then the property-man, the costumier, and the gas-lighter must be applied to rather than the intellectual critic. Undoubtedly, there are rules and principles for producing such effects, but they cannot be included in the fine arts; and we must sharply draw the line between the showman and the artist. The stage, our modern stage, is certainly much more indebted to the artisan than to the artist for effects; and many of the successes of the age are disgraceful to its taste: being childish to a degree, and sometimes not so innocent as infancy. Let us examine what are termed "transformation scenes," even when produced by so clever a man as Mr. Beverley. Is there any principle of art in them? The predominant power is derived from light and colour; and these affect audiences as they might savages or infants. Glare, direct contrasts, colour in its simplest expression, the glitter of gems, the shine of metal, the blaze of unmodulated light, are the preponderating qualities. Here is no art for the uneducated eye; which, like that of the unjudging infant, is merely gorged with crude matter. Nor are the forms better, whether human or scenic. The women have no grace; and their stereotyped attitudes, originally cast in the meanest ideal mould, rather restrain than suggest ideas of beauty. Nor are means taken, of any truly artistic kind, to moderate their ungracefulness; but they are brought out, without any relief of light and shade, into a full barber's block-like prominence. They come with their various ages, their heterogeneous forms, and all their physical imperfections thick upon them, into the artificial light of forty lamps, so thrown as to bring into the strongest unrelieved glare, much that charitable taste would veil in mist. As each dances past the centre of the scene, grimacing at the audience, what but contemptuous pity can be roused by such a show. The violation herein is more of taste than virtue; for no man who has the slightest capacity to appreciate the beautiful in form or effect, can have anything but a feeling of revulsion towards such an exhibition. It is difficult for the mind to bring itself to the fact, that the Greek ideal of elegance, simplicity, and beauty, is the type of what has become so haggard, mean, and tawdry. It is a long step from Theocritus to your modern ballet-master. Such devices lay bare the deplorable vulgarity of the age; which is not confined to the uneducated class, but is, perhaps, most paraded by those calling themselves, *par excellence*, the cultivated. The stalls and boxes are more eager recipients of such art, than even the galleries and pit, who have not so close an opportunity of witnessing it. Probably, the *ne plus ultra* of such vulgarism was lately attained in a divertissement of so-called Spanish dancers at the Adelphi.

It is not, however, only the human adjuncts of the spectacle or performance that are so inartistically applied. There is an equal deficiency of art or taste in the still forms. The halls of coral, the realms of fern, the sea caverns, the depths of ocean, or the regions of stalactites; all afford the same crude, raw display. Mechanism is everywhere; art nowhere. The repetition of the same forms proves the ever-present genius of the pattern-maker; and recalls the kaleidoscope. The same ugly flowers rise to reveal the same espaliered children or women stretched on their iron frames; and the same stars open on the tinsel foil and cloth of silver and gold, which intoxicate the eye with the blinding splendour lavished without mind or taste on all alike. Unreasoning, and excited by the senseless glare, the childish audience clap their hands, and call for the showmaker, who proves his gratitude by adding to the dazzling scene the flaring effect of varying hues. And so, amidst the fumes of sulphur and the evanescent changes of the blue and pink fires, the curtain falls, its sober green a welcome relief to the overstrained and wearied eye.

It is not meant to say that some of these effects might not be used in theatrical displays; but the fault is that they are not used artistically. In fact, there is no such thing as art applied to the stage. The showmen who command and occupy it use colour, machinery, painting, and even music; as publicans in gin-palaces, sell liquor, not as refreshments, but as stimulants. Neither class seeks so much to invigorate as to intoxicate its customers: both produce the same dismal effects. The senses over-stimulated must seek habitual excitement; and, failing its progressional increase, become flaccid, irritable, and ultimately paralyzed.

Those who have watched the different effects of true art and false excitement, will not consider this statement exaggerated or useless. Every production of art, like a beautiful production of nature, soothes, refreshes, invigorates human nature. A fine picture, a musical air, a fair form, a genuine comedy, or anything truly artistic, gives to the spirit a glow and animation that is wholesome as well as delicious. But mere show and no art exhaust and trample down the spirit, and leave us dull, flat, and mentally dead. Not only one touch of *nature*, but one touch of *art* exalts and inspirits us. For true relaxation, then, we should fly to genuine art; for revivification of exhausted mental energy, there is no better restorative. When, as a nation, we have acquired fine taste, and have learnt to appreciate genuine Art, we shall be much nearer a right state of Nature than we are while mistaking excitement for enjoyment, and coarse actualities for dramatic fiction.

MUSIC AT HOME.

TO those having the advancement of music at heart, the study of the London Opera bills is far more comforting than it was some few seasons back. Opposition is good; and rivalry in operatic management an undoubted benefit. The Atlas of the Haymarket, who bears the responsibility of the "old house" upon his shoulders, produces classical and sterling works in quick succession; while the autocrat of Bow Street relies chiefly upon repetitions of past successes. That deliberate animal the tortoise, we are told, ordinarily wins the race; and if good fortune does not refuse to follow a lessee of similarly inactive habits, so much the better for him, whatever it may be for the public. The subscribers and the "upper ten" are notoriously apathetic concerning the musical arrangements for a season, and would possibly be content to witness a return of the Verdi fever which desolated London before the production of *Faust*. Mozart's opera *Il Seraglio* is an important revival; and, besides employing Mdlle. Titiens as the heroine Costanza, Dr. Gunz as Belmont the lover, Mdlle. Sinico as Blonda, Signor Foli as Selim, and Signor Stagno as Pedrillo, gives Herr Rokitansky the chance he deserves in the part of the gardener Osmin. This specimen of the old school—so despised by the fanatics of the "future" creed—was given to perfection on the first night it was performed. The same may be said of *Ernani*, produced July 10th. Mr. Mapleson's new tenor, Signor Tasca, did more with Ernani than could have been anticipated from his previous attempts; but he is woefully deficient as an actor. Mr. Santley's Carlo Quinto is simply perfect; and *Ernani* is far better, in every way, than many of Verdi's later operas. *Roberto il Diavolo* laboured under the disadvantage of a deputy Bertramo (Signor Foli for Herr Rokitansky), a tenor (Signor Tasca as Roberto) unequal to that particular emergency, and a nervous Alice (Mdlle. Celestina Lavini) unfitted for any important part. Mdlle. Ilma de Murska, that illustrious young Dinorah, who walks about during two acts of storm and darkness in thin Parisian pink rosetted boots, literally walked over the course as Isabella on the first *Roberto* night. *Oberon*, *Il Barbiere*, with that pearl among singers Madame Trebelli-Bettini as Rosina, *Semiramide*, and *La Sonnambula* have been played within the month. Mr. Tom Hohler is perhaps a better Elvino than an Arturo, but he has yet many things to learn.

At the Royal Italian Opera, Madame Vilda has not ventured on anything but *Norma* and *Lucrezia Borgia*. Many alterations are to be found in this year's cast of *L'Etoile du Nord;* Adelina Patti as Caterina being the head and chief among them. M. Faure is a far better Pietro than Signor Attri; and no comparison could be instituted between the operatic pet, Adelina, and Madame Van den Heuvel (Caroline Duprez). Signor Naudin is also preferable to the stout tenor, M. Hiliare.

Many of the societies have rested from their labours; concerts are on the wane; and those dreary gatherings known as matinées will soon be things of the past.

The first "ballad concert" held in the transept of the Crystal Palace was speedily followed by a second, at which the Norma of ancient days—the delight of titled subscribers, and the bright particular star of the original *Puritani quatuor*—sang to the "people," otherwise the "shilling mob," "How are the mighty fallen!" may be feelingly exclaimed; for the "light of other days," which should have been extinguished according to promise when its brilliancy began to wane, now twinkles but feebly in the musical horizon. Putting the dignity of art entirely out of the question, it may, perhaps, be argued that any Una, long past her vocal meridian, is justified in taking every conceivable advantage of the British Lion's amiability. That stupid and tractable beast now ambles quietly along while Una croons unpleasingly ornamental versions of his national melodies, and shakes the golden coin from his very thick mane; but he may one day become as impatient in the concert-room as he was, on a certain Saturday evening, in the theatre. In that hour, the ominous word "Basta," delivered with significant energy, may be found not quite so pleasant to hear as "Brava," delivered according to custom, and in defiance of common sense. Toleration of faded capacity may be very well to a certain extent; but the interest of music is by no means promoted when that description of charitable feeling is carried beyond all reasonable bounds. Some who have made both reputation and money in England, sacrifice the former without hesitation, if, by so doing, they can increase their store of the latter. Inefficiency among instrumentalists would not be permitted as it is in the operatic and concert-singing worlds. Would an audience listen to Arabella Goddard, Charles Hallé, or Joachim, struggling through concertos of Beethoven or Mendelssohn with fingers partly paralysed? Would either of these jeopardize fame, and degrade their art, after Nature had withdrawn her countenance from their efforts?

When voices fail; when intonation becomes more than uncertain, and habitually false; when high notes are barely touched and often coolly ignored; and when the time is "dragged" by a singer no longer able to articulate clearly and rapidly, it would certainly become that singer to withdraw with the honours of war. At both the great lyric theatres of London an amount of impatience has been provoked and expressed on sundry nights of the present season; a fact which should be accepted as a warning by those who have nothing more than faultless acting to rely upon. In operatic artistes, a voice and some command over it is required.

Vocalists, however, it would appear, always seem to prefer to retire fighting for every inch of ground; and, in common with too many of us, lack the candour to accept defeat at the hands of the unflagging pursuer, Time. The friendly summonses of that antique general are systematically unheeded; and the approach, or rather the actual commencement of the "sere and yellow" period, is frequently ignored with wonderful pertinacity. The first Napoleon said of Josephine, that "her toilette was an arsenal from which she drew weapons to defy the assaults of time;" but no such aid supplies the need of the fading voice. It is melancholy enough when the necessity for retirement from public life is not frankly acknowledged; but when that proceeding is effected by a series of feints and manœuvres extending over some years, ending at last in unavoidable collapse, the spectacle is simply pitiable. Not only is this a common case; but the musical public are now invited to marvel at that philosophy which can lead Empresses of Song to exchange an honourable repose for an activity bringing with it little else than humiliation. The withering lyric crown is no pleasing object. Faith should be kept with the public; and farewells should be taken once for all. The amateur who economizes, or resigns other pleasures to witness a "final performance," is naturally irritated when he finds that luxury offered to him a second time.

Though the most conspicuous mistakes of this kind have been observed in foreign artists, they are not alone in the obstinacy with which they keep in the field. Certain English nightingales—whose tones, compared with those of other days, are now as unpleasant as the song of that gorgeous fowl, the peacock—still haunt the platforms they might have quitted with honour long ago. With whatever leniency this practice may be regarded, it is none the less to be regretted; and those artists able to rest from their labours in affluence, or even comfort, would increase their own credit by abstaining from competition with others possessing the inestimable advantages of youth and freshness.

THE NEEDLE GUN.

AT a time when the merit of the wonderful "needle gun" is the universal theme of conversation, and when its adoption into the Prussian service is by many looked upon as sufficient alone to account for the unexpected and disastrous defeats sustained by the Austrians in Bohemia, we think that it may not be uninteresting to the readers of NATURE AND ART to have placed before them a short account of an invention which has gained for itself such universal renown, and which will cause a revolution in the armament of the infantry soldier. We propose now to present to our readers such a description as we hope may be intelligible to every one, even to those fair friends who have been accustomed to look upon needles as exclusively their own domain, and devoted entirely to works of a peaceful character. We accompany this description with a drawing of the needle gun in two positions, viz., with the chamber closed and open, and with the component parts of the needle arrangements shown separately. On the same sheet will be given an illustration of Snider's converted Enfield breech-loader, which has been ordered to be introduced into our service.

The "Zündnadelgewehr," or needle gun, so called from the ignition of the charge being produced by a needle or steel-pointed rod which passes through the cartridge, and strikes the percussion powder arranged in its centre, was introduced into the Prussian service in 1848. It was originally patented as a muzzle-loader in 1831, by Mr. Abraham Adolph Moser, of Kennington, and, having been improved upon by a Mr. Dreyse, was adopted by the Prussian government. This gun can be loaded and fired six or seven times in a minute. All that has to be done is to open the chamber, insert a cartridge, shut it, and fire; and, at short distances, the piece may be discharged from the hip without even raising it to the shoulder.

In the Danish war the superiority of the Prussian gun was demonstrated beyond all contradiction; and the objection raised, that soldiers so armed would squander their ammunition, was practically refuted. During the recent brief but terrible campaign in Bohemia, the needle gun has again asserted its superiority, and in so decided a manner as to elicit one universal cry from every civilized nation for the arming of their troops in like manner. Still we would caution the public mind against the idea that there is any inherent merit in this particular form of the needle gun which has obtained for it so startling a reputation.

The successes of the Prussians may rather, we think, be attributable to the fact of their being armed with the *breech-loader* versus the *muzzle-loader* of those opposed to them. In consequence of this superiority in the weapon, the *morale* of the Austrian soldier was utterly crushed, whereas that of the Prussian was proportionately elevated; but it must be remembered that in all future wars such wide disproportion can never occur again. One breech-loader will be pitted against another; and that only which has the most perfect construction will be eligible for use in the battle-field. In the Prussian needle gun now under consideration, we must confess to seeing much that we consider faulty in construction. The parts seem too complex for field service, where the soldier is exposed to every vicissitude of weather, and where it is essential that his weapon should be of the simplest form, consistent with its good shooting qualities. The following description, which is chiefly taken from Sir Howard Douglas's work on Naval Gunnery, will, we hope, with the assistance of the plan and drawing, enable our readers to judge of the general construction of the piece.

The barrel, A A, is screwed into the end of a strong open guider or channel, B B, which virtually

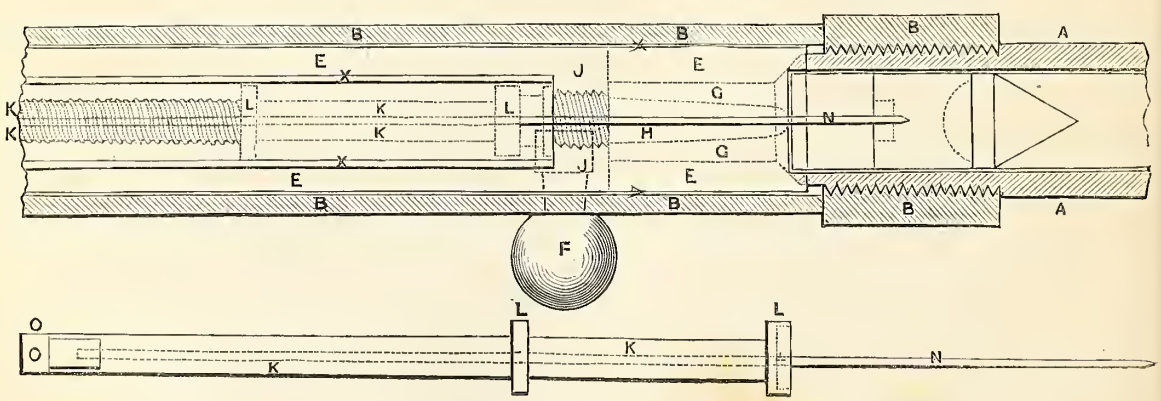
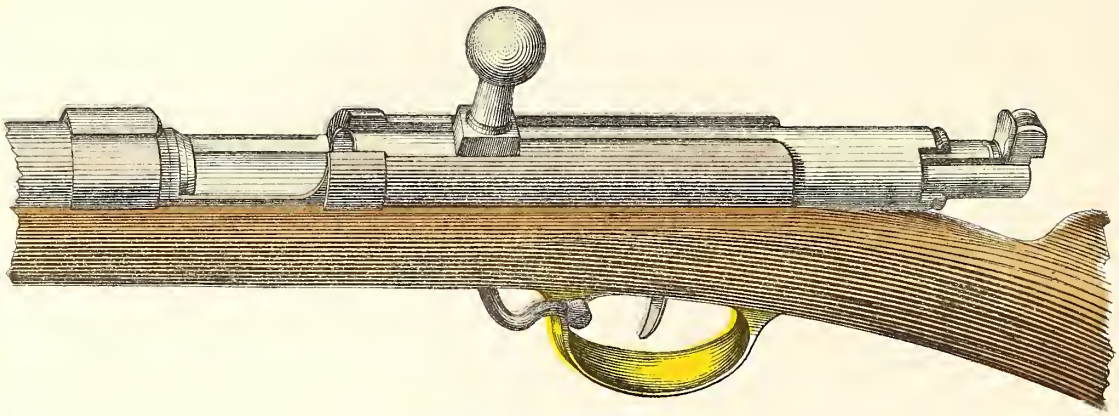
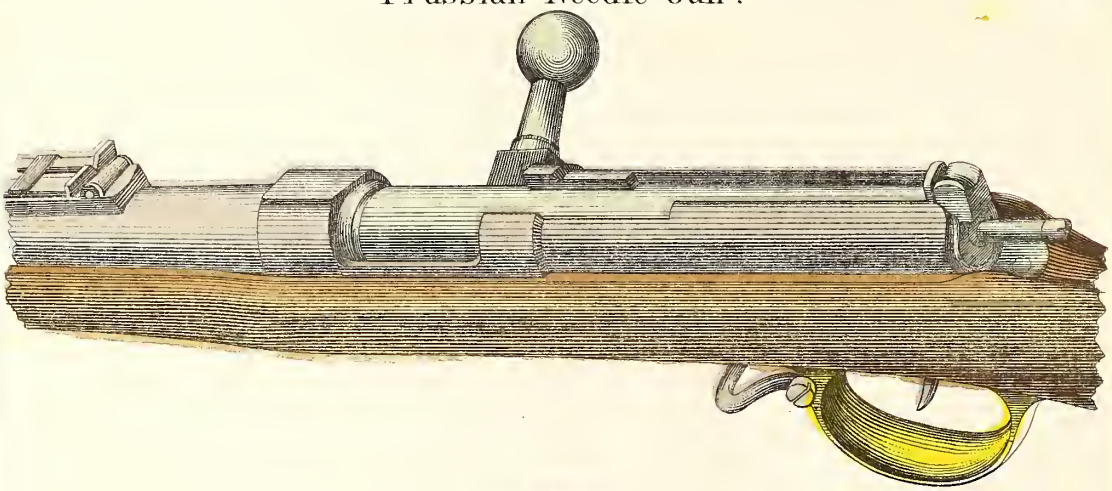


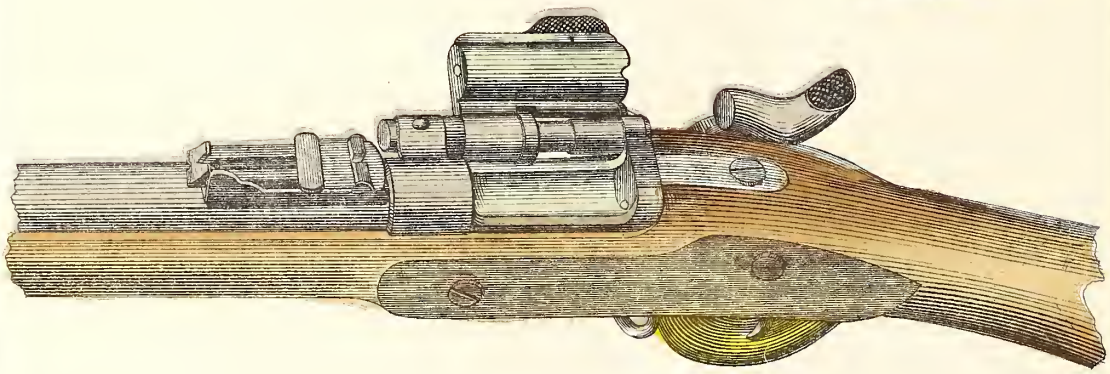
FIG. 1.

forms part of the breeching. Inside of the guider slides an iron tube, E E, with a strong "hebel" or handle, F, and having in the front end a hollow of about 1½ inch in length, G G. In the middle of this space stands forward a "tige" or pillar, H, pierced with a small hole in its entire length, and

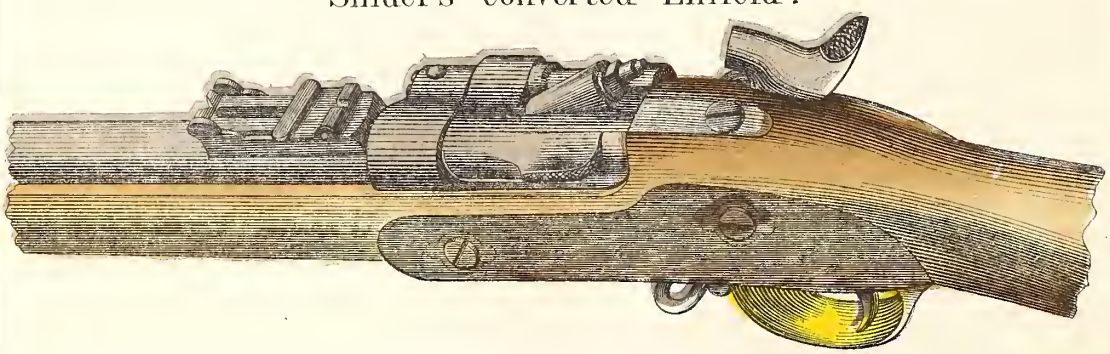


Prussian Needle Gun.



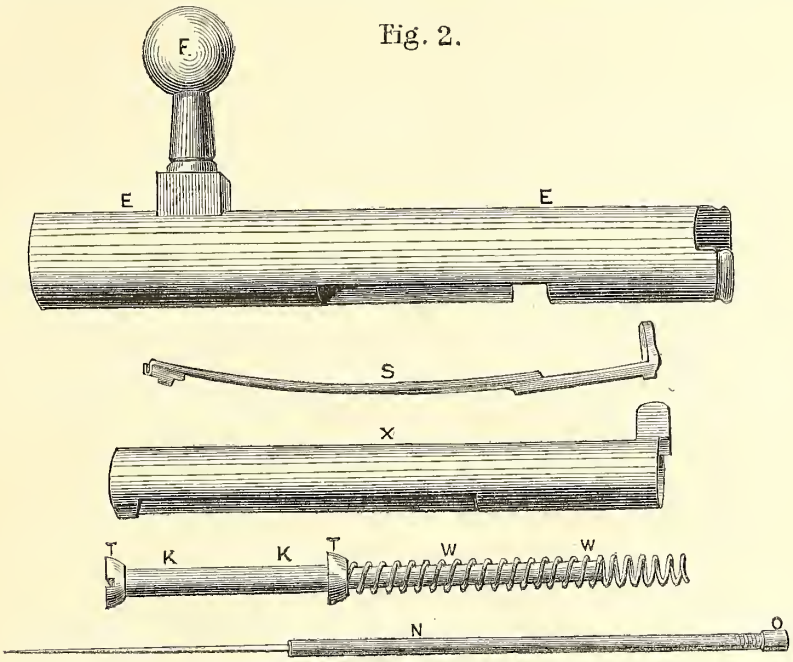


Snider's converted Enfield.



through this passes the needle, N. The steel "tige" is screwed into a solid plate of iron, J J, left in the tube, E E, and this plate it is which receives the whole reactionary force of the charge. Behind the plate J J (see fig. 2) there is a second tube of iron, fixed by a spring in connection with the trigger. It is then ready for firing. The iron tube, E E, which carries the needle-tube, K K, is capable of being moved backwards and forwards near the breech, by means of a handle in its side, which

Fig. 2.



X, carrying within it a smaller tube, K K, girt by two rings, marked L L in fig. 1, and T T in fig. 2. Through K K passes the needle, N, a thin steel wire, about $\frac{3}{100}$ of an inch in diameter, bluntly pointed at the end which is to ignite the charge. passes through a perforation similar to a bayonet notch in the side of the barrel. When the tube is drawn as far as the perforation will allow towards the stock, there is left an open chamber, between it and the barrel, and by this means the charge is

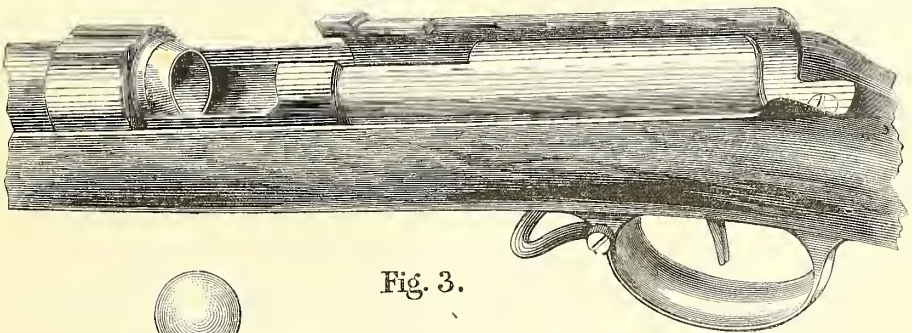
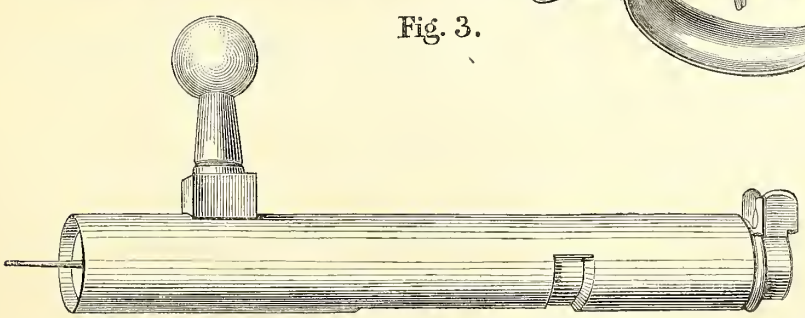


Fig. 3.



Its other end is screwed into a brass head, O, and this again screws into the inner tube, K K, which carries the spiral spring, W W. By means of the ring, T, the needle-tube forces back W W, until it is introduced into the latter. The tube is then pressed forward till its extremity, which is in the form of a frustum of a cone, is in contact with the rear extremity of the barrel, which having the form of

a hollow cone, receives the end of the tube; the handle being then turned round in the notch, the tube is, as it were, locked in close contact with the barrel. Fig. 3 represents the whole needle apparatus as withdrawn from the guider, B B.

The barrel is rifled with four grooves, as shown in A (fig. 4), and the grooves have a uniform depth and twist, with one turn in 42 inches. The bullet, B, is ogival in form, weighs 451 grains, and is fired with a charge of 65 grains of powder in the cartridge. The powder is separated from the bullet by a rolled and compressed paper cylinder, which is hollowed at the end next to the bullet. It has a cavity at C, in which is lodged the fulminating composition to be exploded by the thrust of the needle.

Fig. 4.

The question of the introduction of a breech-loader into our own army has long been under consideration. We will not say that there may not have been much unnecessary delay in coming to any conclusion in the matter. We are informed that one cause of delay—after the report of the committee "on the trials at Woolwich of Enfield rifles converted to breech-loaders," dated 3rd July, 1865—was, that not one of the altered arms offered for experiment came up altogether to the required conditions. Of the eight arms under trial, those sent in by Mr. Westley Richards, Mr. Mont Storm, and Mr. Snider, approached most nearly to the above-mentioned requirements; but Mr. Snider's was the only system adapted for a cartridge carrying its own ignition. The shooting, however, of Mr. Snider's gun was decidedly inferior to the Enfield rifle, although it was considered by the committee that this inferiority arose from defects in the cartridges, which might admit of considerable improvement. To this end, Colonel Boxer, of the Royal Laboratory Department at Woolwich arsenal, was called in, and with his valuable assistance a cartridge (fig. 5) was produced, which we have high authority for stating, entirely removes the objection to Mr. Snider's system. Under these circumstances, we cannot but congratulate the country on the fact that a decision has, at last, been come to, and that within a very few months our troops will be armed with a breech-loading rifle, such as is inferior to no other at present in existence. There is further subject for congratulation in store for us. It is, that the conversion of the Enfield rifle is merely a temporary measure to ensure that our troops shall, at once, be provided with an efficient arm; but the gunmakers may be assured that they will shortly be called upon to send in specimens of breech-loaders designed after their own unfettered judgments, without their being hampered by the necessity to *convert* an old arm. We have no doubt but that this most intelligent body will respond cheerfully to the call, and that ere long a weapon will be produced perfectly satisfactory to the requirements of the day. There is one most essential point that we would endeavour to instil into those who invent as well as those who select from the inventions, namely, that, for actual field-service, the terms *simplicity* and *durability* are almost synonymous. Together with the drawing of the needle gun we give one of the recently converted Enfields (Snider's system). On inspection, it will be seen that the construction is much more *simple*. The weight, also, is a great consideration. Snider's converted Enfield weighing only 9 lb. $5\frac{1}{4}$ oz., whereas the Prussian needle gun weighs 10 lb. 11 oz. The method of conversion is as follows: about two inches of the upper part of the Enfield barrel are cut away at the breech, and a solid breech-stopper, working sideways on a hinge, is placed in the opening thus made. Through this stopper passes a piston, one end of which, when the breech is closed, receives the blow from the hammer, while the other communicates it to the centre of the cartridge and fires it. There is an arrangement for withdrawing the old cartridge case after each discharge, by means of sliding back the stopper on the bar on which it hinges.

Fig. 5.

a Wood plug.
b Bullet.
c Clay plug.
e Cartridge (thin rolled brass sheeting).
f Papier maché.
g Anvil.
h Cap.
j Cotton wool.

There have lately appeared notices in the *Pall Mall Gazette*, and *Army and Navy Gazette*, upon Snider's converted Enfield, and they are so clear and so evidently from the pen of a writer thoroughly conversant with the question, that we feel no apology is necessary for appending copious extracts from them.

In the *Pall Mall Gazette*, 30th April, we find as follows:—

"The arm, which was subsequently improved by the patentee in conjunction with Colonel Dixon, the Superintendent of the Government Small Arms Factory at Enfield, possesses the advantages of being simple, safe, cheap, non-capping, and little liable (apparently) to get out of order; it is free, moreover, from the objection which proved fatal on the preliminary trial to other ingenious systems, of requiring such a reduction of the stock as to destroy the efficiency of a weapon, which, for military purposes, is required to act as a pike as well as a fire-arm."

Again, on the 19th June, in the same journal, we find—

"We estimated in a previous article the accuracy of

shooting of the Snider rifle at from 20 to 25 per cent. above that of the Enfield; it would now seem to be as high, taking an average of all ranges up to 1,000 yards, as 30 per cent. The relative rapidity of fire of the two arms is, in round numbers, about as five to one; and in freedom from fouling, in non-liability to deterioration by bad weather, and in facility of manipulation, the Snider rifle has proved itself remarkably superior to the unconverted arm. The ammunition, too, has exhibited extraordinary powers of resistance to damp; it seems to be capable of standing almost any amount of rough usage, and to enjoy a perfect immunity from miss-fires."

In a late number of the *Army and Navy Gazette*, we find—

"The ammunition appears to be all that can be desired. It will resist damp to an extent far beyond the requirements of actual service; it is remarkably safe against premature or accidental explosion on the one hand, and against miss-fires on the other; its cost will not greatly exceed that of the service Enfield ammunition; and possibly when the manufacture is established on a large scale, and when all contingent charges are taken into consideration, it may prove not more expensive. The principal originality in the ammunition is the construction of the cartridge-case, which is made of thin sheet brass, rolled into a hollow cylinder, one end of which receives the bullet, the other end fitting into the metallic cap which contains the percussion or ignition arrangement, this arrangement differing in no important respects from that commonly adopted in 'central fire' sporting cartridges. The brass case, which is covered with thin paper, uncoils on discharge, and contracts to a slight extent when relieved from the internal pressure of the gas, thus guarding against splitting and escape of gas in the first instance, and facilitating withdrawal in the second. The bullet is an original combination of several constructions. In general appearance it resembles the service Enfield bullet; but it is slightly lighter, and is provided with some grooves or *cannelures* round the back end, which contain the lubrication of pure bees-wax, while the position of the centre of gravity is adjusted by means of a wooden plug in the head." (See fig. 5.)

We have been favoured with a view of a new conversion of the Enfield which has lately been invented by Mr. Needham, of Piccadilly; and have been greatly pleased by the simplicity of the contrivance. We strongly recommend it to the notice of all who take an interest in these matters; and we venture to prognosticate that, in the competition shortly to be called for, Mr. Needham need not fear being behindhand in the race for the prize.

Before concluding these remarks, we would briefly allude to a question, which was raised by Lord Lifford in the House of Lords in April last, respecting the alleged discontent of the leading gunmakers at the assistance afforded by Colonel Boxer in the improvements of Mr. Snider's cartridge, whereby his system was rendered so good as to be finally selected from among all the others by the committee. We cannot help expressing a strong opinion on this point. If a Government officer is enabled from his great experience to offer assistance to any competitor in the improvement of arms selected for the public service, surely the question of it being unfair towards another competitor cannot, for one moment, be taken into consideration. The same experience and assistance would beyond all question have been brought to bear upon the weapon most approved, by whomsoever it had been submitted. To require that an accomplished public officer should on a grave occasion keep to himself his special knowledge in his own particular department, and watch the competition of interested traders with his hands in his pockets, amounts to asking that he should be wanting not only in love of art, science, and his profession, but also, to our thinking, in common honesty to the nation which employs him. It is the adoption of the *most perfect arm* possible that the country cares for, not the ruffled feelings of individuals who may think themselves aggrieved by another's system being approved in preference to their own. We trust we may hear no more of such petty and unworthy complainings. Our future greatness as a nation may materially depend upon the arm with which our soldiers are provided. Numerically we are a feeble nation, and we owe to our public security, and yet more to the comparatively tiny armies we can array, that, if art can effect it, each man shall be found, in the day of trial, a host in himself. The paramount superiority of Britain in manufacture needs only to be evoked, and it were a supreme public crime to neglect the warnings that have reached us. The consciousness of this, of course, prompted alike the praiseworthy steps taken by the late and the present administration to provide an immediate and important supply of breech-loaders. It behoves us to exert every energy collectively and individually to attain the desired end, and dropping all petty jealousy and miserable trade etiquette, to strive, each in his own way, for his country's good: the practical gunmaker by yet newer inventions and still more perfect manufacture; the general public by encouraging and, if need be, pressing the authorities to prompt and decisive action on this momentous question.

FINE ARTS.

THE SOCIETY OF BRITISH ARTISTS, SUFFOLK STREET.

THE cynic might perhaps remark that to affect to report upon a Fine Art Exhibition about to close in a few days were stale, flat, and unprofitable. The exhibitors might, on the other hand, observe that the *ex post facto* approval of verdicts already given by the critical, and endorsed by the purchasing public, were too late to be genuine. On this occasion, however, we neither propose to catalogue the works successfully exhibited by the Republican institution which has so long and so bravely held up its head against the pressure of Academic disfavour, nor to slay again the slain. It is true that there are, among the free and independent of Suffolk Street, men at whose capable hands we would gladly have welcomed better things. But the "Kismet," or fate, of the Oriental (which includes a

host of what we Westerns term "circumstances") decides for the quality and the future of painted as of written productions, and, like those who find too late that they might have done better, the disappointed amateur must submit to it and hope. We are given to understand that up to this time the gross total of sales, from a collection of 1,087 oil-paintings and water-colour drawings, has reached the sum of about £9,000, being within a few pounds more or less equal to the receipts of last year. But at the same time we much regret to observe that a number of works of excellent quality still remain on the walls round us without that pleasant sale-ticket which cheers the sympathizing critic as well as the more interested artist. Whether this may be traced—as the artists will trace it—to the crippled means of a class within whose financial reach the majority of the works of the society generally fall, or to an absence of self-reliant taste from the visitors, it is not our function to decide. The gallery will be dispersed within a few days of our present issue, and our remarks cannot therefore influence the sale of a single canvas; but we will not deny ourselves the satisfaction of offering a parting word of encouragement to a few of the Unsold.

First and foremost in this category, we regret and wonder to find two admirable specimens by J. B. Pyne, painted perhaps more clearly than usual with this distinguished artist, and offered at by no means high prices. One of them, a delightful and delightfully-painted view of Venice, is disfigured by the introduced diagonal line of the "Strada Ferrata," which may account for the neglect of the work by a public who have not had time to digest the conception of a Venetian railway at all, and who will for ages yet to come prefer the Venice of all the painters, from Cannaletti to Cooke, to any edition improved and corrected by the engineers and architects. Mr. W. Fyfe, by affixing to one of the most—if not *the* most—meritorious and complete works in the exhibition, "The Covenanter of Priest Hill," a price perhaps intended to be prohibitory, has probably obviated all offers; but this cannot apply to the very clever march of Commonwealth cavalry, by Mr. F. Weekes, a small canvas within reach of thousands, cheap in price, excellent (though among ten figures the artist has only shown one face) in the drawing and handling of both men and horses. No such hypothesis, again, could account for the yet unmated condition of Mr. H. H. Horsley's pleasant study in the woodland (No. 73), or Mr. John T. Lucas's "Head Centre," a small Irish character head of excellent quality. We are surprised that the pretty *mignonne*, the "Euterpe" of Mr. Radford (No. 216), has not found a purchaser at £12. 12s.; for the work is after the school that the Meissonniers have popularized, and is quite to the taste of the age. The fair guitarist is, however, on the floor-line; and so is Mr. T. Whittle's pretty, luminous little gem, "The Way to Warren" (No. 400), offered at £4. 4s. None can wonder that the vast clan of Williams and Boddington do not sell every inch they produce; still, No. 376, offered here by one of them, constructed on their usual pattern, might have tempted some Art Unionist. No. 545, by another of this family, "A bright Winter's Night in the North," exhibiting a snow-covered range in moonlight, is a truly marvellous gallery picture of considerable size. None who have not well marked the lustrous softness of snow under moonlight can understand this work. Its range of buyers has therefore been limited, or it would long since, we are sure, have changed hands. Mr. Rossiter's (76) "Secret Intelligence" comprises a lady, a lover, and a duenna. It is beautifully wrought, small enough for any private house, and very cheap at twenty-six guineas; but fate—perhaps the unfortunate faults that the figures have no action, and that any title would answer as well as that chosen—has kept it yet unsold. Mr. Woolmer has seldom, in years past, failed to get rid of his fair and misty dreams. This year, he is more distinct and more telling than usual, yet one of his best—in the best position too—falls under our present notice. The fact that two of Peele's Northern country landscapes are unsold, reflects no great credit on the taste of the thousands who, having the means, deny themselves such acquisition. Perhaps they are *too* faithful. That Mr. E. Pettitt's gigantic "Matterhorn," faithful though it be in outline and no less true in colour, should be unticketed is not surprising. The artists of this name too often ignore those classes of society who have no picture galleries or vast mansions, and forget, at the same time, that even in galleries and mansions of this period space is more scarce than pictures. The vials of our surprise are not yet exhausted though hardly adequate to the demands on them in the water-colour room. Here, considering the vast popularity of water-colour drawings, the comparatively absurd prices at which admirable and conscientious work is offered, we are on the painful horns of the following dilemma:—Either ladies and gentlemen of means, position, and even affecting taste, who have abundantly visited these walls, have really no taste, or courage to venture a few sovereigns in support of it, until the painted ware has been through the hands of the dealers; or the position we last month ventured to combat is a true one, and the picture-buying energies of the middle classes (though the auction sales pertinaciously belie this) is completely paralysed. Round us are some twenty or thirty works—we *cannot* refer to all of them—which the amateurs have ignored at prices we have not space to quote; and which—when these walls shall have been stripped, and the artists' stock have found its way to the stores of the middle-man—will be issued to the stupid herd of genteel buyers at double and treble prices, as boudoir and drawing-room furniture. We refer especially to several elegant pieces by Mr. Thomas Pyne (son of the famous oil-painter); to Mr. J. Varley's "Harvest Time" (891); to Mr. Dakin's effective "Hastings" (938*); to the noble drawing of Prague (940) (architectural altogether) by Dobbin; and to a very charmingly wrought and most reposeful "Milking Time," by Mr. Galbraith. This, perhaps, is one of the most elegant drawings here. Two of "Arundel Castle," by Charles Pyne, should long since have had the green ticket, and surely as we write, the "Tanfield Dene" (1075), of Mr. Galbraith, here offered for ten guineas, will, in the fulness of time, and when the artist shall have painted out a monstrous rabbit which is a sad eyesore to the initiated, be offered as "dog cheap," on an expansive cardboard mount, at twenty. Mr. J. D. Linton's water-colour (884) "A Soldier of Fortune," offered at sixty-three pounds, is a large and very imposing three-quarter-length figure of a cuirassed warrior, helmet in hand and lance on shoulder. It is, unfortunately, in a cramped position, and the exigencies of space deny the spectator sufficient room for thoroughly enjoying its qualities. Still, carefully and successfully studied, as well as painted, this magnificent drawing is at once a curiosity and an honour to the rooms. Again and again we have pondered over and enjoyed it; but its destination next week is, we are most sorry to see, yet undecided.

The Studies (in Water-colours) of Italian Art, exhibited for two months past at No. 2A, New Burlington Street, by the artist, Mr. J. Hadwen Wheelwright, deserve, even if out of due season, some notice from every journal professing to embrace Fine Art topics within its range. Had the fine art equivalent in our last number not been somewhat in excess, we should then have offered to Mr. Wheelwright the encouragement and admiration we now bring somewhat repentantly, in that we are too late to be of immediate service to him. He has worthily accomplished his end of illustrating, by means of water-colour copies from great masters, the progress of painting in Italy, from the early Christian period to the grand consummation of the art under Leonardo, Michael Angelo, and Raffaelle. Seven years were devoted to this labour of love. They were seven years not alone of handiwork, but also of worship and meditation; and how successfully they were spent none may know who do not spend a delightful hour or two in presence of their results. Commencing with the famous "Nozze Aldobrandini" of the Vatican, a painting of the first century, the series of copies proceeds to a singular work of the sixth century, from the Calixtus Catacombs, depicting the Last Supper, and very remarkable for the extreme youth of the disciples, without exception, and the conventional outline (as to the beard especially) of our

Saviour's face. We soon reach—for there were resting-places for our painter in intervening ages, although Architecture then flourished—the period of the grand illuminators and altar-painters, of Cimabue, of Giotto, of Giottino, of Simon Memmi, and of Orcagna. The half-sized copy of an altar-piece in Florence by the latter gives an idea of the devotion the artist has brought to his work, and pleases us by the assurance that such devotion met with the great reward, self-approval. He leads us by easy steps, pausing at Dello Delli, Ucelli, and Masolino, all frescoists, to Masaccio, whose beautiful head of Santa Caterina and Brancacci "Temptation" he has delightfully rendered. One of the most elaborate works of the series here arrests us, a grand copy, by the Princess de Croy, a pupil of Mr. Wheelwright's, from the "Coronation of the Virgin" by Fra Angelico. This work, with the seven surprisingly minute panel-pictures at its foot, gives the spectator a good idea of the religious fervour and unspared conscientious labour of the Mediæval painters. Among the most interesting specimens of sixteenth-century art, we find a noble portrait, by himself, of the apparently-loveable Andrea del Sarto, a splendid copy of his Pietà from the Palazzo Pitti; a monk's head—alive, we might say,—by Perugino; and copies of well-known and immortal works by the gigantic trinity, Michael Angelo, Leonardo, and Raffaelle. In the words of Mr. George Redford, who has written a worthy guide to a collection we hope again to traverse under his auspices, "Mr. Wheelwright has set himself strenuously to work with the determination to be absolutely true to the master before him. He would add nothing, nor leave out anything; and, above all, he has endeavoured to obtain, by long and thoughtful study, such an insight into the feeling and manner of each master, as to give to his copy the inestimable quality of truth, without which all would be worse than useless."

The First Number of a new series of the *Fine Arts Quarterly Review*, brought out under the accomplished editorship of Mr. B. B. Woodward, Her Majesty's Librarian, claims the notice of all votaries of the arts. The list of effective contributories, and the luxurious appliances, as respects paper and type, at the editor's command, would seem to assure its taking a position among the classes who have the intelligence and courage to fathom the depths of art, and the means to indulge in valuable books. The opening article is a satisfactory, though too curtailed, review of Leslie and Taylor's "Reynolds and his Times," by W. B. Donne, Esq., illustrated by a Mezzotint portrait of the great president. A valuable antiquarian paper, by Mr. C. Ruland, on the forty miniatures, or, as they would be vulgarly called, illuminations, by Jehan Fouquet, in the possession of Mr. L. Brentano, is illustrated very beautifully in chromo-lithography. We could with pleasure extract much quotable matter from the sensible *éloge* on Sir Charles L. Eastlake, by F. T. Palgrave. Nor is the anonymous article "About Etching" less interesting to the mass of readers who are now taking an interest in that pleasing art. The "Studio-talk" article on landscape-painting, although a little unstudio-like, will find a certain limited circle of admirers outside of the author's set. Not being addressed to the general, and in fact launched far over their heads, no much wider popularity could be expected. The rest of the number is pleasantly written; and the very useful Quarterly *Chronique* of additions to the National Gallery and South Kensington Museum reminds us that a monthly publication of such particulars by the respective departments might long ago have been commanded by the Trustees of those institutions, and published by their officers.

A case of hardship, not to say grievance, has just come under our notice, which we think ought to reach the directors of the Crystal Palace in the shape of printer's ink, through however unobtrusive a channel. It seems that the very interesting Gallery at the Palace, under the management of Mr. Wass, is recruited from time to time by invitation from the directors to artists in general. The fact that a season ticket is issued to each exhibitor, is fair evidence that the company considers itself to a certain extent the obliged party in the transaction. But even this pleasant courtesy, with the contingent advantage to the artist of occasional sales (for which the company receives its due *honorarium*), is not a set-off against the dilapidation—nay almost destruction—of works of art. We write in front of a canvas three feet by two, on which, whether by the action of sunlight, or through want of ventilation—and most probably the former—the painted texture appears "perished," split, and riven to the very canvas ground. It might be set up that this were possible through the premature application of varnish by the painter; but, as we observe that the gilding of the frame has also peeled off in the same position (and without any such excuse), and as, moreover, we are credibly informed that this is a frequent case, we think the eminently politic and well-disposed directors in question should have the matter brought to their notice, if possible, unfiltered through strata of management, sub-management, and red-tapery. What has occurred to our informant may have occurred to hundreds of his co-exhibitors, or, even to a still more helpless class, the purchasing public; and it surely indicates the want of a canvas or calico cover to the glazed roof, or of some other scheme for abstracting from a picture gallery the properties of a bakehouse. The cost of the appliance would, we are sure, be comparatively insignificant, beside the loss of so great an attraction as the Art-Gallery or a few well-fought claims for damage; but we apprehend there is no need for any appeal so enforced to a Board which has blazoned "Fine Arts" so conspicuously on its ensign.

COIN RECENTLY ACQUIRED BY THE BRITISH MUSEUM.

THE silver coin of which the accompanying photograph is given, is one of the recent additions to the British Museum, and of a large and valuable collection lately bequeathed to that institution by Mr. Woodhouse, of Corfu. It has been supposed to be a *dodekadrachm* of Athens, but its weight does not quite answer that denomination. The usual large coins of Athens are the tetradrachms, or pieces of "4 drachms," weighing 270 grains Troy; only one larger piece, a *dekadrachm*, or "10-drachm" piece, in the British Museum, weighing 675 grains, being known. The weight of the present coin, according to Mr. Vaux, is 744 grains, and its size 9·3 of the numismatic scale. The head on the obverse is that of Athene Polios,

or Minerva, protectress of the city, probably copied

from her statue at the Erechtheum, and represents the goddess wearing a helmet chased with a *helix* ornament, crowned with olive, and surmounted by a low crest. She wears ear-rings: the features are archaic, the eye represented in profile, a smile on the lips, like the works of the Dædalids, or of the Æginetan school, such as the statue made by the sculptor Encloios must have been. On the reverse, within an indented square, Minerva's emblem, the owl, standing full face and with extended wings. At the corner is a sprig of olive, also an emblem of the goddess, who, in her contest with Neptune for the honour of naming the city on the plains of Attica, produced it from the ground, and, on account of its supreme utility to man, was adjudged by the assembled gods to be the winner. In the field is AΘE, for AΘENAIΩN, money of the Athenians. The style of art of this coin is anterior to B.C. 470; but the old type was retained for nearly a century later. It is somewhat difficult to account for the deficient weight of this coin; and neither the place, time, nor occasion of its issue, has yet been satisfactorily settled.

To the Editor of NATURE AND ART.

SIR,—We have had sad havoc around our heneoops. Thirteen young chickens have been found headless, their bodies lying quivering on the ground. From the description given by our poultry-woman, I have no doubt but that the *jackdaws* destroyed them, as she saw one of them fighting with a hen, who was trying in vain to defend her little brood. In every instance they left the bodies on the ground, taking the heads to their young ones, whom they are known to feed on the eyes and brains of small birds. My butler was constantly on the watch, but never succeeded in shooting any of them. They would fly away on his approach, and return to the spot the moment he was gone. They have now entirely ceased their depredations, and I am led to believe from this that the young birds are able to support themselves by this time, and are now living on other food. Last year they destroyed a great many young pheasants in Knebworth Park, where there is a colony of them, but the keeper managed to kill several, not however before he had lost the greater portion of his birds. W. R.

Welwyn, June 28, 1866.

[This has the appearance of being a very serious charge against our old friends the Daws. There are persons who openly say, "Jack is a rogue." Of course he is, we all know that. Did he not steal the abbot's ring? and was he not deservedly visited with the thunders of the abbot's "anathema" in consequence? Jack is like the immortal Major Bagstock, "sly, sir." Of that there can be no doubt, and even his best friends admit it. But when we first heard of this wholesale chicken slaughter, we rather hoped that some other marauding delinquent might have been caught in the very act, and our minds have been relieved of much painful suspicion; but the weight of evidence rests heavily against Jack. We have ever been accustomed to regard him with a certain degree of reverence, as being a frequenter and lover of our venerable cathedrals and ancient baronial towers, and we have felt inclined to forgive many a thievish trick from the associations with which his haunts have surrounded him. But as the murderer of dainty young pheasants, alas! Jack, we can take your part no more. We fear there is no help for it but to deliver you over to the tender mercies of "our butler" and poultry-woman (when they can catch you). We can only imagine one little bit of excuse for you; viz., that amongst other of your ecclesiastical preferences, you have learned to be a sad epicure, and that you do not stand alone in your relish for a "daintie dish" of brains.—ED.]

OLLA PODRIDA.

FROM THE SECOND VOLUME of Otto Hübner's *Vergleichende Statistik Europas*, we learn that there are in Europe 1,480 theatres, though only 298 permanent companies. Of these theatres, 337 are in France; 296 in Italy (with Venice, 348); 168 in Spain; 159 in Great Britain; 152 in Austria; in the smaller States of Germany, 115; in Prussia, 76; in Russia, 44 (Poland, 10); in Belgium, 34; in the Netherlands, 23; in Switzerland, 20; in Sweden, 10; in Norway, 8; in Portugal, 16; in Denmark, 10 (Schleswig-Holstein, 5); in Greece, 4; in Turkey, 4; in Roumania, 3; in Servia, 1. In France there are 61 permanent companies; in the smaller States of Germany, 46; in Great Britain, 39; in Austria, 34; in Prussia, 32; in Italy, 24; in Russia, 15. Of capitals, those that possess the greatest number of theatres are Paris, which has 40; London, 26; Naples and Milan, 13 each; Rome, Turin, and Brussels, 10 each; Berlin, Vienna, and Florence, 9 each (in the case of Vienna, singing-halls seem to be included in the calculation); Madrid, Venice, and Genoa, 8 each; Seville, 6; Lisbon, Amsterdam, Hamburg, St. Petersburg, Bologna, Leghorn, and Verona, 5 each. There is a theatre for every 190,000 inhabitants in Europe. The most theatres in proportion to the population are found in Italy, where there is one theatre for every 75,000 persons; in Spain, one theatre to 93,000 persons; in France, one theatre to 110,000 persons; then come Switzerland, Belgium, and the smaller German States, one theatre to 150,000 persons; the Netherlands and Great Britain, one theatre to 184,000 persons; Norway and Austria, one theatre to 235,000 persons; Prussia, one theatre to 243,000 persons; Portugal, Sweden, Denmark, and Greece, one theatre to 380,000 persons. The fewest theatres are found in Russia, with one to 1,360,000 persons. Italy has, therefore, comparatively eighteen times as many theatres as Russia.

THE FAMOUS ILLUSTRATOR of Perrault, Balzac, Chateaubriand, Cervantes, Dante, and the Bible, is now at work on Lafontaine and Shakespeare. The illustrations of the fables of Lafontaine are far advanced, if not completed; and the artist is said to be working, with even more than his ordinary vigour, on the sketches for the illustration of our immortal bard. There was a meeting of publishers some weeks since in Doré's studio, and it was then said that the artist had placed his work with one of these gentlemen at the price of 400,000 francs. This is now contradicted, and it is said that while that sum was offered by the three publishers, M. Doré demanded one quarter more, or half a million of francs. Such is the report which we repeat without guaranteeing its exactness. Twenty thousand pounds is certainly a large sum, but M. Gustave Doré is in a position to ask, and to obtain, an exceptional price. It is added, that of the three publishers, one only was a Frenchman, one an American, and the other an Englishman. The rat figures constantly in Lafontaine's works, and the artist has therefore set up a "*ratary*"—to coin a word for the occasion—at home, and is living on most familiar terms with its fifteen occupants.

NATURE AND ART

September 1, 1866.]

ON MUMMIES.

By S. Birch, LL.D.

No. II.

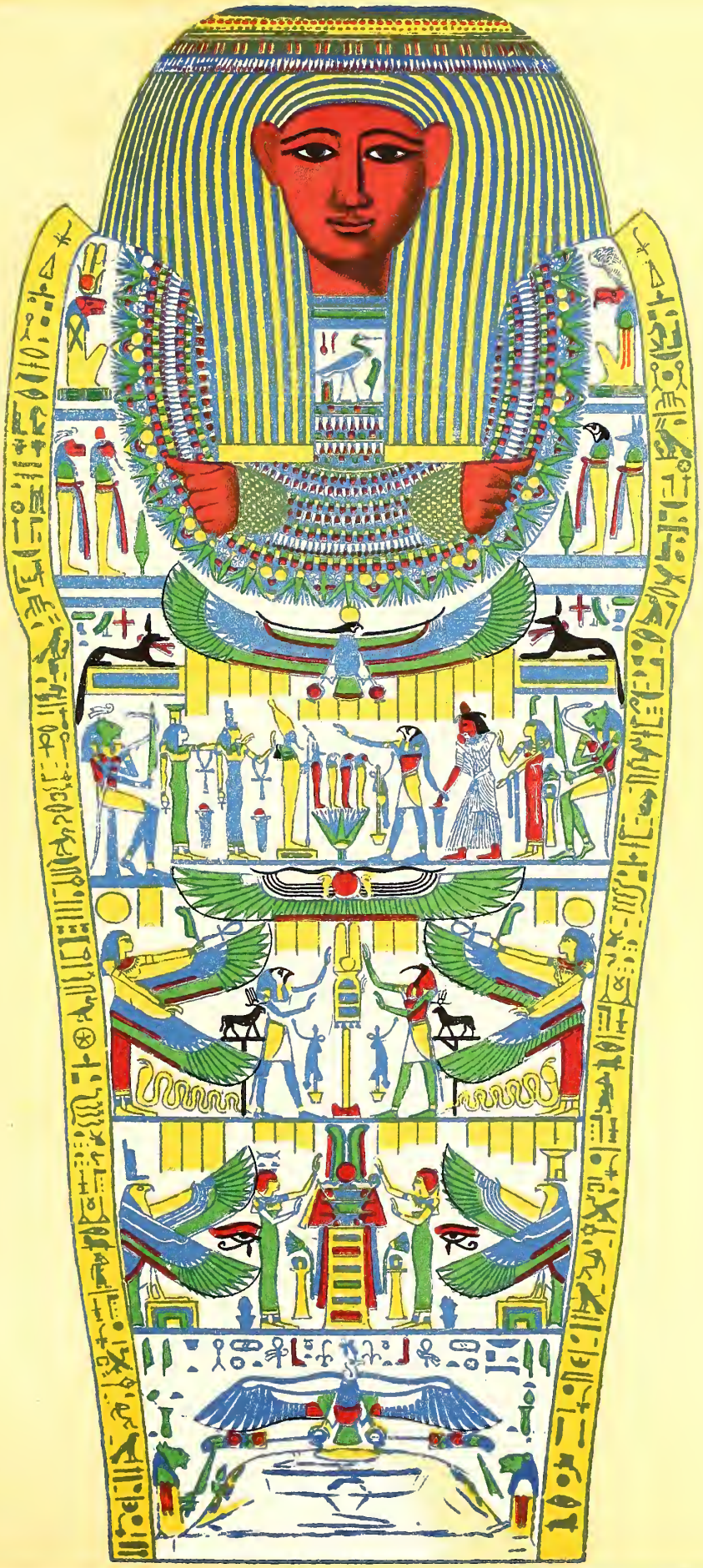
OF MUMMY-CASES, two fashions principally prevailed at the period which intervened from the 20th to the 30th dynasties. Either the mummy was placed in a highly decorated linen case, or else left plain and deposited in a painted wooden coffin. As the undertakers were not bound by any fixed rules, they added or varied their decorations at will; but certain devices appear at particular periods. Thus, at the precited one, about 1000 to 525 B.C., leather straps or braces, called *ankhu*, terminating at the ends in scarlet bands, are found stamped with the names and emblem of the monarch in whose reign the mummy had been made. What particular meaning these straps and devices had does not appear; but at the Roman period, leaden seals, or even waxen ones, were used, probably to hinder mistake or prevent the abstraction of the valuable articles deposited with the dead. After these came the *cartonage*, or linen covering. This was made of several layers of linen, sometimes as many as forty, glued and pressed together, so as to become a hard compact substance; and it was made, when wet, to follow the contours of the mummy. A face and head-dress was modelled in imitation of life, and a small square plinth or pedestal moulded at the feet; so that the mummy, when it was stood upright, resembled a statue on its pedestal. The *cartonage* was made separate from the mummy, and left open at the back, in order to facilitate its adjustment. Sometimes the back had eyelet-holes for a cord to lace it tightly round the form; and under the foot was generally a painted board of sycamore wood, which completed the case. On these cases or *cartonages* were laid smooth and thin layers of stucco, on which were painted, in tempera, various scenes and portions of the Ritual in pure and lively colours. These scenes had reference to the Ritual for the Dead, and, although great latitude occurs, were yet arranged in a certain order. The hair is generally painted blue or black, and on its crown is often seen a scarabæus, emblem of the future existence or transformation made by the dead in the future state. A fillet or wreath is disposed round the head, with flowers of the lotus in front; and sometimes a mystical formula is traced in hieroglyphs on the fillet. The face is painted red, if that of a man at the earlier periods, and yellow if of a female; but pink was introduced in a later age under the Ptolemies. A rich collar adorns the neck, and the accompanying pectoral plate is often adorned. A ram-headed hawk, emblem of Khnum or Chnebis, the Creator, flying with extended wings, and holding a signet in each claw, is generally painted on the breast. Beneath this is the hawk of Ra, or the Sun, wearing the disk and horns upon his head, and flying in the same attitude. Over the lower part of the chest is the judgment scene, or vignette of the 125th chapter of the Ritual. This scene, more or less complete, represents the deceased introduced by Thoth or Hermes into the presence of Osiris, the judge of the dead, seated on his throne in the hall of the two Truths. Before him is the Devourer, symbolized as a monster composed of a hippopotamus, lion, and crocodile; and the New-birth or Metempsychosis, indicated by cubit measures, terminating in human heads. In other compartments, at the sides, are deities and genii of the dead; and beneath, another vignette represents that of the 89th chapter of the Ritual. It is the union of the soul and body, the revisit of the disembodied spirit to its mortal tenement. The soul, symbolized as a hawk with a human face, flies down, holding in its hand the emblem of life, which it brings back to the mummy laid on its sepulchral bier. From this, down the centre of the *cartonage*, is a standard of a housing surmounted by two plumes, emblem of the cemetery of Abydos, in which reposed the deified Osiris. On the staff of this stands a line of hieroglyphs, expressing the usual dedication to different deities of the dead—to Osiris, to Ra, to Ptah Socharis Atum, and other gods—invoking them to give the dead food and drink, and other substances that he required, to permit him to go in and out of

Hades, to admit him at the Empyreal gate, and to let his soul leave the earth for heaven. The sides have generally different sepulchral deities, while over the insteps are painted the jackals of Anubis, who guarded the paths of the North and South; and the eyes of Horus, emblems of the sun and moon. Although mere decorations or plain surfaces are often found under the feet, two pictures sometimes there appear. One represents the sandals of the mummy, on which are painted an Asiatic and a Negro bound hand and foot, and representing the detested foreigners and neighbouring enemies of Egypt trodden under the sandals of the dead. The other, equally common at the period, has a bull,—the Apis, bearing the mummy on its back, carrying it far away over the hills to the cemetery. All these paintings alluded to the deceased as another Osiris; for upon his model he was embalmed and encased, and the name of the deceased after the 12th dynasty, was always preceded by that of Osiris as a title. All the funeral ceremonies and litanies, in fact, turned upon this mystic symbolism, and represented the burial and destiny of Osiris himself in the regions of the dead. It is not possible to here describe more than the normal pictures of the *cartonage*, for there are many varieties of these decorations. Some, instead of numerous deities, are inscribed with extracts from the Ritual of the Dead; others are crowded with figures of deities, enriched with gilding upon a deep blue background; but the usual colour of the ground is white, while the figures and accessories are in blue, red, black, and yellow.

On the decline of Egypt under the Ptolemies and Roman prefects, the decorations declined in beauty and character; the form of the bandages not following so nearly the contours of the form, and the *cartonage* being superseded by a linen covering of one piece, on which the subject is coarsely painted in tempera and various colours, such as a light red, green, or pink. There is no longer any relief, but, *en revanche*, there is a greater attempt at portraiture, and the features offer Greek types. The heads are crowned with wreaths, the forms clad often in the *peplos* or the *stole*, and *chiton* with purple borders; while rings, earrings, shoes, and bracelets, and the whole costume are Greek. In many cases, indeed, some of the Osiris type is still preserved, especially the network covering of meshes over the body; but the details are more Greek than Egyptian. The deities are still sepulchral; and Isis, Nephthys, and the jackals of Anubis, are often depicted. At an earlier or later date, real portraits, painted in encaustic on thin panels of cedar, in *chiaroscuro*, and of considerable merit, are placed over the head, and are the only decoration of the mummy.

As to the inscriptions of this age, new religious formulæ appear, and present a mixture of Greek and Egyptian ideas. The duration of the life of the deceased is often recorded; the sepulchral formula disappears, and is replaced by addresses to the deceased. The hieroglyphs are mere scrawls, and the spectator feels that bad Greek is worse than good Egyptian art. At this time, especially in Thebes, the art had fallen to a low ebb; but some of these painted shrouds appear to have been continued till a late period. Two of a male and female, at present in the Augusteum at Dresden, both in the ornaments of their dress resembling the Byzantine *dalmatica*, and in the other decorations of their forms are referable to as late a date as the 5th century. When the art finally ceased, is not known; but in the days of St. Athanasius, about A.D. 325, it was still in existence; and as it was not repugnant to Christian doctrines, like the incremation of the Greeks and Romans, it probably existed till the Arab invasion of Egypt. The bodies thus prepared were called by the Egyptians *Sahu;* for *moom* appears to be a Persian word, derived from the wax employed for the purpose. As no mummies, however, have been found with Coptic inscriptions, the art must have declined, at the appearance of that writing, which was apparently later than the 5th century A.D.; for the demotic continued in use till the 5th century. Along with the mummy were often laid various objects; sometimes the musical instruments and arms which the deceased used during life. One of the mummies of the Roman period, in the British Museum, has a pair of cymbals; and the splendid gold, jewelry, and arms found on that of the Queen Aahhetp, of the 18th dynasty, and shown in the Great Exhibition of 1862, will illustrate the splendid objects deposited with the mummies.

When the outer covering, whether *cartonage* or painted sheet, was placed on the form, there only remained the coffin and sarcophagus to complete the funereal adornment. The richness, the beauty, the variety of the different coffins are so great, that they can only be described in classes. The earliest shape, found in the sepulchres of the 4th and 6th dynasties at Memphis, and continued till the 11th and 12th, was a deep rectangular box, with a flat cover. The sarcophagi—a term to be restricted to the outer coffins of stone—were at this period always rectangular. These sarcophagi are generally of granite, exceedingly simple in their forms, and, if sculptured, with only a few architectural ornaments. The monarch who built the Great Pyramid had no better sarcophagus than a plain box or trough of granite, without a single ornament. The functionaries of the succeeding dynasties, who could not afford the expense of such costly sarcophagi, were deposited in wooden coffins of cedar or sycamore, of the same shape. Cedar, which must have come from the Lebanon, was too rare and costly to be covered entirely with stucco; and when it was used, a deeply-cut line of hieroglyphs round the border of the chest and down the lid repeated the sepulchral dedications to Osiris the judge, and Anubis the preparer of the mummy. The interior had always running round the chest a frieze, on which were painted, in brilliant colours, the various objects of dress and toilet, such as the dagger, shoes, cosmetic vases, and washing-utensils of the day, the number of which, required or possessed, were duly

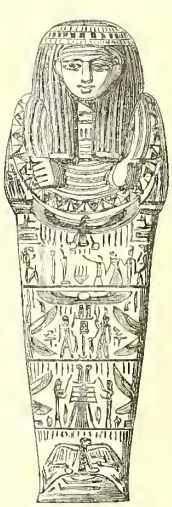


recorded above them. In a hieroglyphic table beneath was the "carte," or bill of fare, of the wealthy proprietor. Sixty or seventy varieties of viands and liquors attest that the flesh-pots of Egypt were by no means despicable. Beef and veal—but no mutton—several varieties of venison, chiefly kid, five or six kinds of water-fowl, and pigeons, were the principal animal food.

Tastes differ, but hyenas were eaten in the days of Cheops. As yet, however, the fowl and the pheasant were unknown, and no fish figures in the "carte," although the fisheries were in full activity and fish was salted and cured for inferior persons. There were many varieties of bread and biscuits, conserves of dates and other fruits, and abundance of vegetables. Onions were an aristocratic dish in those times of old. Wine of three or four kinds is mentioned, beer, and pure water. The rest of these coffins have lines of inscriptions—chapters of religious books, themselves so old that they are cited in different versions—and have, some of them, running comments and esoteric explanations. Ask who wrote them, and the rubrics answer, Thoth, or Hermes Trismegist himself, on some stone or slab, and left them in some nook or cranny for the orthodox Egyptians.

As sycamore was indigenous—for Egypt, poor in trees, was the land of the sycamore—the coffins of that less costly wood were more decorated. The whole of them were covered with a layer of white stucco, having the inscriptions, frieze of utensils and architectural ornaments painted on it. The finest example of this kind of coffin is at Berlin, and it shows the perfection to which this kind of decoration was carried. No doubt these chests were mystical copies of that in which Osiris had been nailed down by Typhon and his associates. The most usual form of coffin, however, was that which, to judge from the one of Mencheres found in the third pyramid, was fashioned like the *cartonage*. The body was represented mummied in its bandages, with the face and head attire carved. Variety is found in these, for some of the coffins of the 18th and 19th dynasties are quite flat behind, for the purpose of lying down on the floor of the tomb, while others, under the subsequent dynasties, are modelled in the shape of figures, and have a flat plinth from the nape of the neck to the feet, and a small pedestal beneath. Such coffins were evidently intended to be set upright, and in the scenes of the tombs are so represented. The last prevailed from the 26th dynasty, or about B.C. 700 to the Christian era. The older fall into two classes—those of cedar ornamented on their covers and sides with incised inscriptions and the figures of a few deities. Those selected are Nu, or the Firmament, the wife of Seb and mother of Osiris, who received the deceased into her arms; Anubis; and the genii of the dead. The texts are chapters of the Ritual. The sycamore sarcophagi of this shape are painted like the rectangular ones, in bright and varied hues, and the distribution of their decorations resembles that of the *cartonages*. Sepulchral deities, dedicatory inscriptions, chapters, mystical standards, and the deity Socharis, lord of the tomb, or the goddess of the West, inside the lower part or chest, and Nu, or the Heaven, inside the lid, are the prevailing pictures; but other curious ones are sometimes introduced. A planisphere is painted inside the coffin of a high priest of Amen-Ra, instead of Nu, or the usual firmament.

These coffins were often placed in two or three others. The outermost, being the largest and containing the others, are decorated more or less elaborately than the inner ones. The faces of these coffins are often carved out of dark sont, or acacia wood, the eyebrows inlaid with blue glass or porcelain, the lids of bronze, the white of the eye of ivory of the hippopotamus, and the pupils of obsidian. The beards are sometimes of ebony, at others inlaid with blue glass. The hands occasionally are carved of separate pieces, and emerge from the mummied form. The sarcophagi either follow the above types, or else are large chests, rounded at the head, with covers representing faces. The royal ones, which transcend all others in magnificence, are of granite, breccia, alabaster, and marble. The favourite subject is the passage of the Sun through the hours of the night in the Egyptian purgatory, and the destiny of the soul. At the Roman period the coffin entirely changed in shape, the mummies were laid on a flat board, the cover was vaulted with upright posts at the four corners. Greek zodiacs, the hours of the day and night, scenes of the Great Judgment, and various deities of the later Pantheon. The whole is often surmounted by the hawk of Ra. The board on which the mummy lies has often Athor, Venus, Nu, or Rhea.



We may speak hereafter of the other objects which accompanied the mummy, the subjects of the tombs, the dogma of the immortality of the soul, and fate of the body.

The accompanying woodcut and coloured plate * represent the lid of the coffin of a priest named Pakhratharaubsh, son of Nahamkhuns. He was incense bearer of the temple of Khons, or the Moon, at Thebes, and probably lived at the close of the 20th or beginning of the subsequent dynasty, about B.C. 1000. The coffin is a splendid example of the period, and exhibits the principal peculiarities of the class. The handsome head-dress, collar, and bracelets are elaborately painted in detail. On the throat is the Ibis, or bird of Thoth, with the ostrich feather, emblem of that god as 'declarer of Truth.' The seated crocodile and hippopotamic deities on the shoulders are selected from those who preside over the halls of the *Aahlu*,

* The woodcut gives a bird's-eye view of the coffin lid; the coloured plate shows also its sides and that part of the ornamentation which extends on to them.

Elysium, where the virtuous and wicked receive their appropriate reward and punishment. The four deities in the compartment below them, having a human, ape, hawk, and jackal head, are the genii of the Amenti, or Purgatory, children of Osiris, who particularly presided over the interior portions of the body and insured their preservation. They were called Amset, Hapi, Kabhsenuf, and Tuautmutf. The sepulchral vases were made in their shape and consecrated to them. In the third, or next compartment, is the judgment scene, having above the hawk of the Sun flying, and at the sides the jackals of Anubis, to whose care was confided the paths or roads of the Upper and Lower Hemisphere, or World. Sometimes they are seen conducting the Sun's barge along its empyreal course. The judgment scene, the usual vignette in the Papyri of the 125th chapter of the Ritual, has the god Osiris, the Pluto or judge of the dead, standing and listening to the speech of the god Horus, who introduces Pakhratharaubsh into his presence, attended by the goddess Ma, or Truth, in whose hall the judgment has taken place. Before Osiris is a papyrus flower with the four genii; behind him are Isis and Nephthys; at the sides are two lion-headed deities with snakes, also the demons of Aahlu. The inscriptions announce the names and titles of the deities, and that Osiris has given the usual good things to the deceased. In the fourth compartment the standard of the East is raised by Thoth, Ibis, and Horus, hawk-headed. At their sides are rams, emblems of Chnanus, the Denuurgos, or creator. The winged goddess on each side is Uati, who presided over the lower hemisphere. The fifth compartment has the *Tat*, a mystical form of Osiris, supported by the goddesses Nit, or Neith, Minerva, having a shuttle, and Selk having a scorpion on her head and symbolic eyes. The hawks at the side are emblematic of Hut or Tebhut, the winged disk, or Agathodaimon. In the fifth compartment the vulture of the goddess Nenshem soars, holding the standard of Victory in its claws. Shu, a solar god, kneels underneath on the emblem of refulgence, elevating the solar disk, in which is the Scarabæus, emblem of existence. At the sides are deities from the halls of the Elysium. The inscriptions in these scenes explain their meaning. The side inscriptions are dedications to Ptah-Socharis-Osiris, a pantheistic form of Osiris, who was considered to preside especially over the tombs. Besides the usual statement that he affords the usual food to the dead, they affirm that this god has granted the soul to come out of the Nu, or Firmament, and to enter into the empyreal gate of the Morn. Round the lower part of the chest, which is not seen in the plate, are several demons of the Aahlu, or Amenti, and other mystical types, as the cow and fish of Athor, the Egyptian Venus. The inscriptions of this portion state that the gods grant to the deceased to receive his food and drink off their table or altar like one of themselves; to enter also the gateway of the Hall of Truth, where he is tried and acquitted; and that his heart is poised equally in the balance, for were it lighter he would be condemned to the flames of Egyptian purgatory or sent back to re-enter the world in another form.

THE STORY OF A SCENE-PAINTER.

WHEN, in the middle of the seventeenth century, Sir William Davenant, manager of the theatre in Lincoln's Inn Fields, discarded the "traverses" and tapestries which had theretofore been accepted as sufficient for the purposes of stage illusion, and substituted regular scenes "painted in perspective," without doubt there were to be found many conservative old playgoers who lifted up their voices against the startling innovation, and prophesied the approaching downfall of the drama. If the grandsons present marvelled how elder generations could for so long have gone without such useful and necessary appliances, assuredly the grandsires were complaining that now things had come to a pretty pass indeed, when a parcel of beardless, empty-pated boys, not content with stage fittings such as had been esteemed good and sufficient by the late Mr. William Shakespeare and his great brother-dramatists, demanded foolish paintings and idle garniture, that diverted attention from the efforts of the players and the purpose of the playwrights, and had never been dreamt off, and would never have been tolerated in the good, and simple, and palmy days gone by. Unquestionably, the first "painting in perspective" brought upon the boards was in the judgment of many the thin end of a wedge, which, as it thickened, was certain to drive forth and destroy all that was intellectually and vitally precious in the drama, and to lead the way to a last scene of all in the eventful history of the stage, which should be "second childishness and mere oblivion."

But the scene-painter having set foot within the theatre was not to be expelled. The intruder soon won for himself a large popularity; held his ground against criticism and opposition. He was no mere journeyman dauber. From the first he had taken distinct rank as an artist. Lustrous names adorn the muster-roll of scene-painters. Inigo Jones planned machinery and painted scenes for the masques, written by Ben Jonson, for performance before Anne of Denmark and the Court of James the First. Evelyn lauds the "very glorious scenes and perspectives, the work of Mr. Streeter," serjeant-painter to King Charles the Second. In February, 1664, the Diarist saw Dryden's "Indian Queen" acted "with rich scenes as the like had never been seen here, or, haply, except rarely, elsewhere on a

mercenary theatre." Mr. Pepys—most devoted of playgoers—notes occasionally of particular plays, that "the machines are fine and the paintings very pretty." In October, 1667, he records, that he sat in the boxes for the first time in his life, and discovered that from that point of view "the scenes do appear very fine indeed, and much better than in the pit," to which part of the house he ordinarily resorted. The names of the artists who won Mr. Pepys's applause have not come down to us. But previously to 1679, one Robert Aggas, a painter of some fame, was producing scenes for the theatre in Dorset Gardens. Nicholas Thomas Dall, a Danish landscape-painter, settled in London in 1760, was engaged as scene-painter at Covent Garden Theatre, and was elected an Associate of the Royal Academy in 1771. For the same theatre, John Richards, a Royal Academician, appointed secretary to the Academy in 1778, painted scenes for many years. Michael Angelo Rooker, pupil of Paul Sandby, and one of the first Associates of the Academy, was scene-painter at the Haymarket. Other names of note might be mentioned before the modern reputations of Roberts and Stanfield, Beverley and Callcott, Grieve and Telbin, are approached; and especially over one intermediate name are we desirous of lingering a little. The story of the scene-painter of the last century, who was well known to his contemporaries as "the ingenious Mr. De Loutherbourg," presents incidents of singularity and interest, that will probably be found to warrant our turning to it for purposes of inquest and comment.

The biographers of Philip James De Loutherbourg are curiously disagreed as to the precise period of his birth. Five different writers have assigned five different dates to that occurrence: 1728, 1730, 1734, 1740, and 1741; and it has been suggested, by way of explanation of this diversity, that the painter's fondness for astrological studies may have induced him to vary occasionally the date of his birth, in order that he might indulge in a plurality of horoscopes, and in such way better the chance of his predictions being justified by the actual issue of events. He was born at Strasbourg, the son of a miniature painter, who died at Paris in 1768. Intended by his father for the army, while his mother desired that he should become a minister of the Lutheran Church, he was educated at the College of Strasbourg in languages and mathematics. Subsequently he chose his own profession, studying under Tischbein the elder, then under Vanloo and Francesco Casanova; the latter, a painter of battle pieces after the style of Bourgognone. By his landscapes exhibited at the Louvre, De Loutherbourg acquired fame in Paris, and in 1763 was elected a member of the French Academy of Painting, being then eight years below the prescribed age for admission to that distinction, say the biographers who date his birth from 1740. Quitting France, he travelled in Germany, Switzerland, and Italy, and in 1771 came to England, moved hitherward, probably, by the opinion then prevalent both at home and abroad, that (as Edwards puts it in his Anecdotes of Painting) "some natural causes prevented the English from becoming masters either in painting or sculpture." Shortly after his arrival in England he was engaged by Garrick to design and paint scenes and decorations for Drury Lane Theatre, at a salary of £500; a sum considerably larger than had been paid thitherto to any artist for such services.

Of gorgeous scenery and gay dresses Garrick was as fond as any manager of our own day; he knew that these were never-failing allurements to the general public. Yet as a rule he confined his spectacle to the after-pieces; did not, after the modern fashion, illustrate and decorate what he regarded as the legitimate entertainments of the theatre. For new as for old plays, the stock scenery of the house generally sufficed, and some of the scenes employed were endowed with a remarkable longevity. Tate Wilkinson, writing in 1790, mentions a scene as then in use which he remembered so far back as the year 1747. "It has wings and flat of Spanish figures at full length, and two folding doors in the middle. I never see those wings slide on but I feel as if seeing my old acquaintance unexpectedly." Of the particular plays assisted by De Loutherbourg's brush, small account has come down to us. They were, no doubt, chiefly of a pantomimic and ephemeral kind. For the "Christmas Tale," produced at Drury Lane in 1773—the composition of which has been generally assigned to Garrick, though probably due to Charles Dibdin—De Loutherbourg certainly painted scenes, and the play enjoyed a considerably run, thanks rather to his merits than the author's. Some years later, in 1785, for the scenery of O'Keeffe's "Omai," produced at Covent Garden Theatre, the painter furnished the designs, for which he was paid by the manager one thousand pounds, says Mr. J. T. Smith; one hundred pounds, says Mr. O'Keeffe; so stories differ! The scenery of "Omai" was appropriate to the then newly discovered islands in the South Pacific, and the play concluded with a kind of apotheosis of Captain Cook. In the course of "Omai," Wewitzer, the actor who played a chief warrior of the Sandwich Islands, delivered a grand harangue in *gibberish*, which of course, for all the audience knew to the contrary, was the proper language of the natives; a sham English translation of the speech being printed with the book of the songs. The harangue was received with enormous applause!

As a scene-painter, De Loutherbourg was decidedly an innovator and reformer. He was the first to use set-scenes, and to employ what are technically known as "raking pieces." Before his time the back scene was invariably one large "flat" of strained canvas extending the whole breadth and height of the stage. He also invented transparent scenes, introducing effects of moonlight, sunshine, fire, volcanoes, &c., and effects of colour by means of silk screens of various hues, placed before the foot and side lights. He was the first to represent mists, by suspending gauzes between the scene and the audience. He made something

of a mystery of the artifices he had recourse to, was careful to leave behind him at the theatre no paper or designs likely to reveal his plans, and declined to inform any one beforehand as to the nature of the effects he desired to produce. He secretly held small cards in his hand which he now and then consulted to refresh his recollection, as his assistants carried out his instructions.

After Garrick had quitted the stage (in 1776) and sold his share in the management of Drury Lane to Sheridan and his partners, it was proposed to De Loutherbourg to continue in his office of chief scene-painter, his salary being reduced one half. This illiberal scale of remuneration the artist indignantly declined, and forthwith left the theatre. He is said, however, by Parke in his "Musical Memoirs," to have painted the scenes for the successful burletta of "The Camp," produced by Sheridan, at Drury Lane, in 1778. But he now devoted himself more exclusively to the production of easel-pictures. He had, in 1773, become a contributor to the Exhibition of the Royal Academy. In 1780 he was elected an Associate; in the following year he arrived at the full honours of academicianship. Peter Pindar, in his "Lyrical Odes to the Royal Academicians for 1782," finds a place for De Loutherbourg. Having denounced the unlikeness of Mason Chamberlin's portraits, he satirizes the style of art of the landscape painter:—

> "And Loutherbourg, when Heaven so wills,
> To make brass skies and golden hills,
> With marble bullocks in glass pastures grazing:
> Thy reputation too will rise,
> And people gaping with surprise,
> Cry 'Monsieur Loutherbourg is most amazing!'"

And in another ode he derides the artist's pictures as "tea-boards," "varnished waiters," and avows that his rocks are "paste-board," while his trees resemble "brass wigs," and his fleecy flocks "mops."

Probably the quiet of his studio oppressed our painter somewhat. The simple effects attainable in an easel-picture did not satisfy him. He missed the appliances of the stage: the coloured lights, the transparent scenes, the descending gauzes, and cleverly combined cut-pieces. He would not go back to Drury Lane, however; as to that he was fully determined. He would not toil for ungrateful managers, or paint backgrounds merely to supplement and enrich the exertions of the actors. He decided upon providing London with a new entertainment; upon opening an exhibition that should be *all* scene-painting.

Charles Dibdin, the famous sea-song writer, who was also a dramatist, a composer of music, an actor, a scene-painter, and a manager, had constructed in Exeter Change what he whimsically called "The Patagonian Theatre:" in truth, a simple puppet-show, upon the plan of that contrived years before by Mr. Powell, under the Piazza, Covent Garden, and concerning which Steele had written humorously in the *Spectator*. Dibdin, assisted by one Hubert Stoppelaer, humorist and caricaturist, wrote miniature plays for the doll performers, recited their parts, composed the music, played the accompaniments upon a smooth-toned organ, and painted the scenes. The stage was about six feet wide and eight feet deep; the puppets some ten inches high; the little theatre was divided into pit, boxes, and gallery, and held altogether about two hundred persons. For half a century no exhibition of the kind had appeared in London. The puppet-show was old enough to be a complete novelty to the audience of the day. For a time it thrived wonderfully; then managers and public seem both, by degrees, to have grown weary. Dibdin and his friend departed; the exhibition fell into the hands of incompetent persons; then closed its doors. The dolls, properties, scenery, and dresses were brought to the hammer by merciless creditors; and there was an end of the puppet-show. In 1782 De Loutherbourg took the theatre for the exhibition of his Eidophusikon.

De Loutherbourg had professedly two objects in view: to display his skill as a scene-painter well versed in dioramic effects, and to demonstrate to the English people the beauties of their own country. He averred "that no English landscape-painter needed foreign travel to collect grand prototypes for his study." The lakes of Cumberland, the rugged scenery of North Wales, and the mountainous grandeur of Scotland, furnished, he said, inexhaustible subjects for the pencil. He opposed the prejudice then rife among artists and amateurs alike, that England afforded no subjects for the higher display of the painter's art. He confined the Eidophusikon for the most part to the exhibition of English landscapes under different conditions of light and shadow.

A chief view exhibited was from the summit of One Tree Hill, Greenwich. There was cleverness evinced in the selection of this landscape. A large public are always prepared to be pleased when they are shown something with which they are well acquainted. Each spectator found himself, as it were, individually appealed to. Each had seen One Tree Hill, and could bring to bear upon the subject his own personal knowledge and observation, and so test and certify to the painter's skill. The view was a set-scene with a movable sky at the back: a large canvas twenty times the surface of the stage, stretched on frames, and rising diagonally by means of a winding machine. De Loutherbourg excelled in his treatment of clouds; he secured in this way ample room and verge enough to display his knowledge and ingenuity. By regulating the action of his windlass he could control the movements of his clouds, allow them to rise slowly from the horizon and sail obliquely across the heavens, or drive them swiftly along, according to their supposed density and the power to be attributed to the wind. An arrangement of set-pieces cut in pasteboard represented the objects in the middle distance: the cupolas of Greenwich Hospital, the groups of trees in the park, the towns of Greenwich and Deptford, and the shipping in the Pool; due regard being had to size and colour, so that the laws of perspective in distance and atmosphere might not be outraged; the immediate foreground being constructed of cork

broken into rugged and picturesque forms, and covered with minute mosses and lichens, "producing," says a critic of the period, "a captivating effect amounting indeed to reality."

In his method of illuminating his handiworks De Loutherbourg was especially adroit. He abandoned the unnatural system (introduced by Garriek on his return from the Continent in 1765) of lighting the stage by means of a flaming line of footlights, and ranged his lamps above the proscenium, out of sight of the audience. Before his lamps he placed slips of stained glass—yellow, red, green, blue, and purple; and by shifting these, or happily combining them, was enabled to tint his scenes so as to represent various hours of the day and different actions of light. His "Storm at Sea, with the loss of the *Halsewell*, East-Indiaman," was regarded as the height of artistic mechanism. The ship was a perfect model, correctly rigged, and carrying only such sail as the situation demanded. The lightning quivered through the transparent canvas of the sky. The waves, carved in soft wood from models made in clay, coloured with great skill and highly varnished to reflect the lightning, rose and fell with irregular action, flinging the foam now here, now there, diminishing in size and fading in colour as they receded from the spectator. Then we read—"De Loutherbourg's genius was as prolific in imitations of nature to astonish the ear as to charm the sight. He introduced a new art: *the picturesque of sound*." That is to say, he simulated thunder by shaking one of the lower corners of a large thin sheet of copper suspended by a chain; the distant firing of signals of distress he imitated by striking, suddenly, a large tambourine with a sponge affixed to a whalebone spring—the reverberations of the sponge producing a curious echo, as from cloud to cloud, dying away in the distance. The rushing sound of the waves was effected by turning round and round an octagonal pasteboard box, fitted with shelves, and containing small shells, peas, and shot; while two discs of strained silk, suddenly pressed together, emitted a hollow, whistling sound, in imitation of loud gusts of wind. Cylinders loosely charged with seed and small shot, lifted now at one end, now at the other, so as to allow the contents to fall in a pattering stream, represented the noise of hail and rain. The moon was formed by a circular aperture cut in a tin box containing a powerful Argand lamp, which was placed at the back of the scene, and brought near or carried far from the canvas as the luminary was supposed to be shining brightly or to be veiled by clouds. These contrivances, from a modern point of view, may strike the reader as constituting quite the A B C of theatrical illusion. But then it must be remembered that they were, for the most part, distinctly the inventions of De Loutherbourg, and, upon their first introduction, were calculated to impress the public of his day very remarkably.

For two seasons De Loutherbourg's Eidophusikon, exhibited at the Patagonian Theatre in Exeter Change, and afterwards at a house in Panton Square, was attended with singular success. Crowds flocked to the new entertainment; the artist world especially delighting in it. Sir Joshua Reynolds, who was a frequent visitor, loudly extolled Mr. De Loutherbourg's ingenuity; recommending him to the patronage of the most eminent men of the time, and counselling all art-students to attend the exhibition as a school of the wonderful effects of nature. Gainsborough's ready sympathies were completely enlisted. For a time, after his manner, he could talk of nothing else, think of nothing else; and he passed evening after evening at the exhibition. He even constructed a miniature Eidophusikon of his own—moved thereto by De Loutherbourg's success and the beauty of a collection of stained glass, the property of one Mr. Jarvis—and painted various landscapes upon glass and transparent surfaces, to be lighted by candles at the back, and viewed through a magnifying lens upon the peep-show principle. But at last the fickle public wearied of the Eidophusikon, as it had been wearied of Mr. Dibdin's puppets. The providers of amusement had, in those days, to be ever stirring in the production of novelties. The sight-seeing public was but a limited and exhaustible body then, little recruited by visitors from the provinces or travellers from the Continent. Long runs of plays or other entertainments—the rule with us—were then almost unknown. The Eidophusikon ceased to attract. The amount received at the doors was at last insufficient to defray the expenses of lighting the building. It became necessary to close the exhibition and provide a new entertainment. Soon the room in Exeter Change was crowded with visitors. Wild beasts were on view, and all London was gaping at them.

Meanwhile De Loutherbourg prospered as an artist. His reputation grew; his pictures were in request; he was honoured with the steady patronage of King George III., and was personally an acknowledged favourite at court: a thoroughly successful man indeed. Then we come down to the year 1789, and find the artist of the Eidophusikon assuming a new character. He has become a physician—a seer—a fanatic—and, it must be said, a quack; a disciple of Mesmer, a friend of Cagliostro; practising animal magnetism, professing to cure all diseases, and indulging in vaticination and second sight.

Towards the close of the eighteenth century, credulity and imposition shook hands heartily and held a great festival. Throughout civilized Europe a sort of carnival of empiricism prevailed. Quack was king. A spurious leaven of charlatanism was traceable in politics, in science, in religion—pervaded all things indeed. The world was mad to cheat or to be cheated. The mountebank enjoyed his saturnalia. Never had he exhibited his exploits before an audience so numerous and so sympathetic—so eager to be swindled, so liberal in rewarding the swindler. Gravely does Miss Hannah More address Mr. Horace Walpole, concerning what she terms the "demoniacal mummery"—"the operation of fraud upon folly" which then occupied the country. "In vain do we boast of the enlightened

eighteenth century, and conceitedly talk as if human reason had not a manacle left about her, but that philosophy had broken down all the strongholds of prejudice, ignorance, and superstition; and yet, at this very time, Mesmer has got a hundred thousand pounds by animal magnetism in Paris, and Mainaduc is getting as much in London. There is a fortune-teller in Westminster who is making little less. Lavater's physiognomy books sell at fifteen guineas a set. The diving [divining ?] rod is still considered as oracular in many places. Devils are cast out by seven ministers; and, to complete the disgraceful catalogue, slavery is vindicated in print and defended in the House of Peers! Poor human nature, when wilt thou come to years of discretion?" Mr. Walpole writes back (he has always a *proper* tone for Miss More, reserving his levity and licence for less staid correspondents):—"Alas! while Folly has a shilling left, there will be enthusiasts and quack doctors;" and he adds, airing his pet affectation—a hatred of royalty, a love for republicanism—"and there will be slaves while there are kings or sugar-planters."

Joseph Balsamo—more generally known by his pseudonym of Count Alexander De Cagliostro, expelled from France, after nine months' durance in the Bastille, on account of his complicity in the diamond necklace fraud and scandal—had taken refuge in England, bringing with him a long list of quackeries and impostures: among them, his art of making old women young again; his system of "Egyptian freemasonry," as he termed it, by virtue of which the ghosts of the departed could be beheld by their surviving friends; and the secrets and discoveries of the great Doctor Mesmer in the so-called science of animal magnetism. Walpole at once proclaims the man a rascal, and proposes to have him locked up for his mummeries and impositions. Miss More laments that people will talk of nothing else. "Cagliostro and the cardinal's necklace," she writes, "spoil all conversation, and destroyed a very good evening at Mr. Pepys's last night." A discussion of such subjects was by no means compatible with Miss More's notion of a good evening.

What could have induced simple-minded Mr. De Loutherbourg to put trust in this arch-juggler? Can it have been that from the painter's native Strasbourg had come to him unimpeachable fables of Cagliostro's feats during his stay there, which had preceded his nefarious expedition to Paris? But the artist is ever excitable, receptive, impressible—the ready prey of the dealer in illusion and trickery. De Loutherbourg is soon at the feet of the quack Gamaliel; soon he is proclaiming himself an inspired physician, practising mesmerism. Cosway and his wife declared themselves clairvoyants. Other painters of the period were dreaming dreams and seeing visions. Nor was it only the artist world that took up with, and made much of, Count Cagliostro and his strange doings. Wiser people than Mr. De Loutherbourg were led astray by the mountebank, though they did not wander so far from the paths of reason and right, nor publish so glaringly the fact of their betrayal into error. Cagliostro was the rage of the hour. The disciples of Dr. Mesmer were without number. It was in ridicule of general rather than class credulity that Mrs. Inchbald wrote (or adapted) her comedy of "Animal Magnetism," produced on the stage of Covent Garden in 1788.

After a time, however, the bubble burst. The duped were becoming desperate. A loud cry arose. As a doctor, De Loutherbourg failed utterly; as a seer, his prophecies broke down lamentably. Presently there were very riotous proceedings outside his house at Hammersmith: throwing of stones and smashing of windows. De Loutherbourg prudently disappeared until the storm had passed away. He was believed to have gone to Switzerland with Cagliostro, proposing never to return. But soon news came of the arrest of Cagliostro in Rome, and of his condemnation to death for being a freemason—the sentence being afterwards commuted to perpetual imprisonment: and Cagliostro's friend was found to be in England again, no longer practising as a physician, but following his legitimate profession, hard at work before his easel as though he had never quitted it.

His fanatical escapades seem soon to have been forgiven and forgotten. A highly esteemed painter, he was permitted to resume his place in society. In proof of the regard in which he was held, it may be noted that the guardians of the De Quinceys deemed it worth while to pay De Loutherbourg a premium of one thousand guineas, to receive as a pupil William, the elder brother of Thomas De Quincey, who had given promise of skill in drawing. The young fellow died, however, in his sixteenth year, about 1795, in the painter's house at Hammersmith. A more moderate sum had some years previously been demanded of Mr. Charles Bannister, the actor, for the art-education of his son John. For a payment of fifty pounds per annum for four years, it was agreed that John Bannister should be taught, boarded, and lodged. But the arrangement came to nothing. De Loutherbourg demanded the payment of the money in advance. He mistrusted the players. They had caricatured him on the stage as "Mr. Lanternbug," in General Bourgoyne's comedy, "The Maid of the Oaks;" and then his mocking artist brethren caught at the nick-name, corrupting it, however, to "Leatherbag." Mr. Bannister was unable or unwilling to comply with the painter's requirements: so young John was sent to the school of the Royal Academy, which he soon deserted, and finally trod the boards, and charmed the town as an actor. Another pupil of De Loutherbourg, and a close imitator of his worst manner, who is yet worthy of public notice as the founder of the Dulwich Gallery, was Francis Bourgeois, knighted by the King of Poland. Edward Dayes, artist, critic, and biographer of artists, is said to have exclaimed eccentrically in reference to Sir Francis: "Dietricy begat Casanova, Casanova begat De Loutherbourg, De Loutherbourg begat Franky Bourgeois, a dirty dog, who quarrelled with nature, and bedaubed her works!"

By his pictures of "Lord Howe's Victory on the 1st of June, 1794," and "The Storming of Valen-

ciennes," De Loutherbourg acquired great popularity. For Macklin's Bible (most luxurious of editions, in seven folio volumes, published in seventy parts at one guinea each!) he painted "The Angel destroying the Assyrian Host," and "The Deluge;" the latter a particularly spirited and effective performance. Dayes, his contemporary, suggests, however, that he was made a typical painter by the printsellers, rather than by the efficiency of his own genius in that respect. For the higher purposes of art, his composition was too defective, his drawing not masterly enough, and his execution too small and delicate. But Dayes greatly admired De Loutherbourg's "Review of Warley Camp," in the Royal Collection; especially praising the animals introduced, and the cool grey of the general effect; the painter as a rule being prone to a somewhat coppery tone of colour.

In 1808, Turner, appointed Professor of Perspective to the Royal Academy, went to live at Hammersmith, in order, it has been suggested, to be near De Loutherbourg, of whose works he was known to be an admirer. That he should have aided in the art-training and forming of the greatest of landscape painters is a real tribute to the merits of De Loutherbourg. It is something to have been even the fuel that helped the fire of a great genius to burn the more brightly.

The characteristics of the old scene-painter's art which attracted the attention of Turner, were doubtless the boldness and strength of his effects: his rolling clouds and tossing waters; his sudden juxta-positions of light and shade; his bright and transparent, if occasionally impure and unnatural, system of colour. He was of another and inferior school to Richard Wilson, Gainsborough, and Constable, who, differing widely in their points of view and in their methods of art, are yet linked together by a common love of the natural aspects of the objects they studied, and a preference for a tender and temperate over what may be called a hectic and passionate rendering of landscape. But succeeding or failing, De Loutherbourg certainly aimed at the reproduction of certain pictorial *tours de force* which they would never have attempted. He was an innovator in the studio as on the stage. According to modern modes of thought he was not, of course, a conscientious worker. His landscapes were indeed begun, continued, and completed in his painting-room. A few crude pencil lines upon a card were enough for him to take home with him; for the rest he relied upon his memory or his invention. But in such wise was the general method of his time. Painters produced their representations of land and sea after close toil by their firesides. There was not much taking of canvasses into the open air in the days of De Loutherbourg.

Pursuing such a system, he became, necessarily, very mannered; and yet, with other and greater men, he helped to destroy a conventional manner in art. Rules had been laid down restricting the artist to an extent that threatened to oust nature altogether from painting. It had been decreed, for instance, that in every landscape should appear a first, second, and third light, and, at least, *one* brown tree. Departure from such a principle was, according to Sir George Beaumont and others, flat heresy. De Loutherbourg avowed himself a heretic. And he ventured to object to the old-established, well-known classically-composed landscape, which was becoming an art nuisance. The thing has disappeared now, but the reader has probably a dim acquaintance with the classically-composed landscape. It was somewhat in this wise: in no particular country, a temple of ruins on the right hand was balanced by a trio of towering firs on the left. In the middle distance was raised another temple in a more tenantable state of repair, above a river crossed by a broken bridge, the ragged arches strongly reflected in the water; at the back, in the centre of the horizontal line (gracefully waved with lilac mountains), was the sun, rising or setting, it was never quite certain which; whilst little ill-drawn, inch-high figures straggled about in the foreground, and furnished a name to the picture: Æneas and Dido, Venus and Adonis, Cephalus and Aurora, Apollo and Daphne, &c. &c. De Loutherbourg's dashing sea-views and stormy landscapes, although they might savour a little of the lamp and the theatre, did service in hindering the further production of the "classical compositions" of the last century.

De Loutherbourg died on the 11th March, 1812, at the house in Hammersmith Terrace which had been the scene of his exploits as an inspired physician. He was buried in Chiswick churchyard, near the grave of William Hogarth.

Dutton Cook.

THE WHISTLING SAND-GROUSE.

(*Pterocles exustus.*)

By W. B. Lord, Royal Artillery.

AWAY on the wide table-lands of Central India, where the sparse herbage struggles for existence amongst the scattered stones and spots of arid sand, and where in the far distance the herds of black-buck move restlessly along in search of provender, will be found the home of the whistling sand-grouse. When wandering about, hunting and collecting, through tracts of country but rarely visited by Europeans, I found these beautiful and interesting birds exceedingly numerous, winging

their way high over-head in flocks varying in number from eight or ten to sixty or seventy, cutting the air on sharp wing, in flight much like the golden plover of our own downs and uplands, but pealing forth from time to time a whistle so wild, shrill, and piercing, that, once heard, no other sound could well be mistaken for it; and, like coming events, which are said to cast their shadows before them, the whistle of the sand-grouse is often heard long before the passing flock can be distinguished. A notion prevails amongst the natives that they feed only on stones, and show, in proof of the belief, a number of hard black grains frequently found in the stomachs of the birds, gravely asserting that they are pieces of black gravel, and excellent grouse-food. These, on examination, I found to be the seed of a trailing plant, of which the sand-grouse, and a small grey plover frequenting the open dry plains, are particularly fond. I have often found more than a teaspoonful on opening one of the latter.

It was a long time after reaching the plains where our whistling friends abounded before I could obtain a single specimen, or even get within a very long shot of one. All my treacherous and well-laid plans proved utterly abortive. Creeping, like some huge lizard, amongst the tufts of dry herbage and over the angular stones, to where, in the vanity of my hopes, a splendid pack *should* have been snugly feeding, or, with stealthy step and ready gun, approaching the very spot from which I felt sure they would rise the next instant, only to have my hopes dashed to the ground by hearing their exasperating whistle as they skimmed away aloft, three hundred yards from where I expected to find them. I tried the borders of a small lake at sunset, with a hope that some thirsty party might just drop in for a cooling drink before retiring for the night. Other guests there were, resolutely bent on liquid refreshment, who drank "manfully," and then whisked off for the night; still, no sand-grouse. The nightjars flit out from the bushes, and skim the lake-shore; the bats follow; then the frogs amongst the water-plants croak forth their evening song; and a stray skulking jackal creeps by. No grouse to a certainty; and as a flock of wild ducks pass on whistling wing, I send the contents of both barrels into the brown of them, gather up the spoils, and tramp home to camp, *grouseless* as usual, wondering whether sand-grouse do not, after all, bear charmed lives.

The next day was devoted to the investigation of some long ravines running up amongst a range of low hills stretching away across the distant plains, the piercing whistle of my "Will o' the wisp" friends greeting me on my morning's ride, as though in mockery of my fruitless efforts to secure them.

Of other specimens, animal, vegetable, and mineral, there was no lack; and my bags and boxes grew heavy and plethoric as the noontide sun poured down his scorching rays on the glistening sand and slabs of bare rock. A mass of tangled creepers, growing from the stalks of some crooked and contorted trees rooted amongst the rocks, formed a bower-like shelter from the midday heat; and here I remained snugly ensconced, watching the proceedings of a couple of crow-kings (*Tyrinus intrepidus*), who had succeeded in catching a wretched old crow, away, possibly "on urgent private affairs," from his companions. On the top branches of a dead bush crouched poor "Corvus," with outstretched wings, open beak, and protruding tongue—a picture of helplessness, much like some huge East-Indiaman beset by two fast pirate schooners, who swoop down within range, deliver their fire, send the splinters, or rather feathers, flying, re-load, and at it again, beating their bulky antagonist by the rapidity of their movements and persistency of attack. It is hard to say why these "forest cruisers" are so determined in their attacks on other birds, as they are mainly insect-feeders, and therefore have no direct object, so far as I can see, in making themselves so disagreeable to their neighbours. On quitting my leafy shade, as the sun sinks behind the distant hills and the shadows lengthen, I follow down the course of a wide but dried-up water-course, scattered over which were island-like spots of beerberry and other bushes. In wading over one of these, some red-legged partridges were disturbed, and ran here and there, rat-like, below the undergrowth. Not caring much whether they rose or not, I threw my gun over my arm and strode onward, when, under my very feet, from amongst the dry, short grass, barely high enough to cover a quail, a whole pack of my long-sought whistling sprites went skimming off. My old "No. Eleven" seemed to leap of his own accord to my shoulder. A couple of sharp, ringing cracks, two tufts of feathers drift off on the wind, the charm was broken, and a brace of *P. exustus* met their doom, as did four more brace before the ravine was quitted for the plain. From this time I found no difficulty in shooting as many as I required, both as specimens and food. In flavour, the sand-grouse is excellent; but to eat it in perfection, the proceeds of the morning's sport should contribute to the evening repast. By the next day the flesh becomes hard; but even then, few Indian birds are equal to it for a *grill*.

For the markings and varied tints of the male and female bird, I must refer the reader to the annexed plate, as they are there so faithfully rendered that any description of mine would be superfluous. I shall therefore content myself by stating that the dark-coloured and spotted bird is the male, and that crouching by the water-side his mate.

Farther on, close to the borders of Malwah, I found, in the month of February, several of their nests, or rather the pits in which the eggs are deposited. These are mere accidental depressions in the ground, advantage being taken of any tuft of dry grass or small pile of stones sufficiently high to afford a slight protection to the bird when sitting. The eggs were invariably three, and unlike those of any other bird I have ever met with. Both ends of the egg are alike; and it more nearly resembles a diminutive, elongated, speckled pumpkin, than

anything else I can compare it to. The colour is greenish, dotted with brown; a smoky tinge pervading all.

Many of the native chiefs capture the sand-grouse with falcons; and it is by no means uncommon to see a whole cortége of falconers, hawk on fist, riding forth in all the pomp and panoply of the Middle Ages, to enjoy the "royal sport," for which the wide plains of India are peculiarly adapted.

When, some short time since, our coasts were visited by so many specimens of Pallas's sand-grouse (*Syrrhaptes Pallasii*), I entertained sanguine hopes that a few might escape the fate generally awaiting the wandering migrant which instinct or chance may cast on our inhospitable shores. No Andaman Islander or inhabitant of the Feejee group ever dealt out death amongst a shipwrecked crew with more ready hand than do the thoughtless gunners and hedge-poppers of our favoured land amongst such wretched birds as may have the misfortune to be rare. So far, I have heard no report as to the discovery of either the nests or young of the sand-grouse in England; and it is to be feared that poor *Syrrhaptes P.* has, like many another traveller seeking a home, found an untimely end instead. Whence these wandering refugees came it is hard to say. The coast of Barbary is the nearest point I know from which it is probable they could have winged their way. Their journey was a long one, at any rate; and it is most devoutly to hoped that, should fortune favour us with another batch of these mottled and painted gems, shelter and protection, rather than tow and wire, may be extended to them by the lords of the soil.

FEARFUL CONTEST IN AN OMNIBUS.

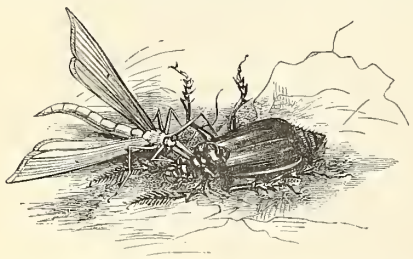
ABOUT the 14th of June, 1866—it is always better to be particular in dates—I got into one of the "City Atlas" omnibuses in Cheapside, *en route* for the house of a friend who resides at St. John's Wood. The omnibus was nearly full of very quiet-looking people, and I little imagined that, before I quitted it, I should become a spectator of one of the fiercest contests, long carried on, with continually varying success, that I ever witnessed. Nothing of more than ordinary character took place till we reached Orchard Street, when most of the passengers got out, leaving only a lady, who wore a very pretty bonnet, in the corner above me, and a gentleman on the opposite side, who had been occupied during the greater part of the journey in examining, by means of a small but powerful lens, which he wore attached to a piece of elastic cord about his neck, some evidently minute objects contained in a small mahogany box that he appeared to handle with great care. Having completed his examination, he tucked the lens into a small pocket neatly contrived in the upper part of his waistcoat, evidently intended for the express purpose of forming a convenient receptacle for that little instrument, and then proceeded to the deposition of the mahogany case in his black leather bag.

The whole of the omnibus between our party of three and the door having, as stated, become vacant, the cocoa-nut matting on the floor was no longer covered by a crowd of feet, and was therefore in full view—a fact which I noticed because I perceived that my opposite fellow-passenger, of the lens and mahogany box, suddenly fixed his eyes upon it with an earnestness of expression that at once attracted my attention. The lady with the pretty bonnet also perceived the excessive earnestness of manner so suddenly assumed by that gentleman; and his entire change of demeanour having, as she seemed to think, something suspicious about it, she turned towards me with an inquiring look, and a shade of uneasiness, and even alarm in her manner. In answer to her silent questioning, I moved my head mechanically towards that part of the omnibus upon which the intent look of my opposite neighbour appeared to be riveted with such a strange kind of fascination; and with the idea of satisfying my own curiosity and that of the lady at the same time, I was about to advance towards the spot which appeared to absorb the entire attention of our companion;—but, before I could advance a single step in that direction, he sprang forward, and, seizing my arm, held me tightly down to my seat, while the lady in the corner, with the pretty bonnet, alarmed at this display of physical force, uttered a little involuntary scream. This he did not notice, but pointed, with impatient and reiterated gesture, darting his fore-finger forward several times, in rapid succession, towards a particular spot on the cocoa-nut matting, saying, in a loud whisper—"Look there! there—there's a fight! Talk of Austrians and Prussians! look at that—that!"

I looked instinctively towards the spot so energetically indicated; and there, on the floor of the omnibus, I certainly did perceive that, in the slight mist caused by the dust of the matting shaken up by the motion of the omnibus, a fierce combat was actually going on—between two opponents who seemed savagely to have made up their minds that there should be only one survivor of the conflict. First one and then the other was uppermost in the struggle; and then came long and well-balanced trials of power, in which the strength of each combatant appeared exerted to the uttermost, while neither gained any permanent advantage. It is true, they were but pigmy duellists; but their fierceness and energy were such, that my interest became at once as much excited as that of my opposite neighbour; and I could not take my eyes from a contest which was carried on with several weapons, each skilfully and vigorously used.

"Do you know what they are?" said my fellow-passenger, who may as well be called Lens, for the sake of brevity; "do you know what they are?" he repeated.

"Of course I do," I replied; and was about to explain, but the increasing vigour of the combat prevented me from saying more at the moment.



"Scale armour against plate!" cried Lens. "Scale armour has it! Bravo! bravo! You'll excuse my partiality as an umpire," said he, turning to my side of the omnibus, "but I am a Lepidopterist."

The lady looked anxiously and inquiringly towards me, seeming to say, "Is he not rather a Bedlamite? and will you not protect me, or call out to the conductor?"

"Do not alarm yourself," I interposed; "it is only a very curious conflict that is going on upon the floor of the omnibus."

"I can see nothing," said my companion in the pretty bonnet with increasing alarm, and evidently thinking that both her travelling companions might be in collusion with the Davenport Brothers, or perhaps were those celebrated spiritualists *in propriâ personâ*, and that the combatants, if any, were but thin air, and visible only to "mediums" such as we might be, or to those under a similar kind of influence.

"Allow me to explain," said Lens, who now perceived her alarm and incredulity, "allow me to explain. A very singular duel is being fought in this vehicle, between——"

"Between?" inquired the lady, who may as well be called Pretty Bonnet, with an incredulous and slightly scornful air.

"Between a moth and a beetle," said I, interrupting my opposite neighbour.

"Absurd! nonsense!" exclaimed Pretty Bonnet; but yet, as she looked towards the exact spot so accurately indicated by Lens, she too perceived that a battle—an actual battle, fierce and fatal—was going on, and became from that moment an equally absorbed spectator of the contest.

We were near the top of Baker Street. The omnibus was going at a brisk rate; and, what with the jolting motion of the vehicle and their own energetic efforts for victory, the tiny gladiators often leapt from the floor in the full tide of the relentless strife—falling together, still in the grip of a combat *à l'outrance*, and renewing the struggle in some new position, with ever-varying advantage, sometimes to the one and sometimes to the other side.

The moth at length became permanently uppermost; and his long, sharp palpi appeared to be fixed, with murderous intent, between the head and thorax of the beetle. He seemed to have found out a joint in the plate armour of his adversary, and was pursuing his advantage with deadly effect.

"Bravo, *Scales!*" cried Lens again. "A hearty Lepidopterist is cheering you on," he continued. "Do you know the moth?" he said, turning to me.

"No, not exactly; but it appears to be a Crambus."

"So I thought, at first," said Lens; "I thought it was *Crambus petrificellus*, the 'common veneer,' as collectors call it; but look at the long, sharp palpi that he is driving into the flesh of the beetle at a weak point of his armour, the joint of the thorax. Those are undoubtedly the palpi of a Chilo. I believe it to be *Chilo phragmatellus*, the gigantic veneer; nearly allied to the Crambidæ, it is true, but not a Crambus."

The size of the insect, I agreed, and the form of the wings, as well as the length of the palpi, seemed to bear out his view; "but then," I observed, "*Chilo phragmatellus* is only found at Whittlesea Mere."

"True, very true—you are quite right; and he could not have come all the way to London by omnibus; yet I believe it to be the Whittlesea Chilo. It is just the season for that rare insect—mid-June——"

Here he was interrupted by an intensified state of the combat; the dust flew up around the belligerents, and the motion of the omnibus, now crossing the New Road and jolting its hardest, gave new variety and spirit to the fight.

"But," said Pretty Bonnet, "I never knew that moths were savage, pugnacious creatures."

"Nor, indeed, did I," said Lens; "but the pertinacity of modern observation is every day lighting up new beacons on the road to true science. Who, for instance, till Mr. Gould's persevering investigations proved the fact, would have believed that a tribe of Australian birds actually constructed pleasure-bowers, as a kind of decorative and architectural *bel respiro*, quite distinct from their nests? Till the positive discovery was made, the picturesque architecture of the bower-bird would have been treated as a fable. And so with the now-evident combative propensity of moths. Who, that had not witnessed this interesting and spirited contest, would for a moment have believed in it? or in the muscular strength of a slender moth like the little Chilo that is now fighting so fiercely before our eyes? And then," he continued, "we seem to be learning, at the same time, the true functions of the palpi, which, as their name denotes, have been hitherto considered mere 'feelers,' while the present contest seems to prove to us that they are positive mandibles, weapons offensive and defensive, of a truly formidable character. But see—see—the beetle has wrenched himself away from their grasp, and freed his throat. Now the chances are again even. Beware, Scale-armour! plate and corslet may still prove too much for you;" and then

Lens became silently absorbed in the chances of the war.

"What does he mean by scale and plate armour?" said Pretty Bonnet, addressing me, while she also watched the progress of the combat.

"The term 'scale armour,' I conceive, applies to the wings of the moth, which are closely covered with a series of overlapping scales, in the manner of scale armour; the wings themselves, when the scales are removed, being merely a transparent tissue, like a filmy sheet of elastic glass. It is from this circumstance that moths have been scientifically termed 'scaly wings,' or rather Lepidoptera—a term compounded of the Greek *lepis*, a scale, and *pteron*, a wing. This is a characteristic which the great modern naturalist, Linnæus, seized upon at once as one which distinguished them from all other insects; and naturalists devoting themselves to the especial study of butterflies and moths are consequently distinguished as Lepidopterists, as our friend just now called himself. I have no doubt that the small mahogany box which he put away so carefully contains some recently-captured specimens of the moth and butterfly tribes. The term 'plate armour' was, no doubt, used by our friend in reference to the solid cuirass-like armour in which the body of the beetle is encased; a feature in the organization of that class of insects which Aristotle, the first and greatest of naturalists among the ancients, at once seized upon as a well-marked class distinction, and named the class of insects so organized Coleoptera, from *coleos*, a case or sheath, and *pteron*, a wing—in allusion to the casing of the wings by those solid pieces of true plate armour; and the term thus invented and applied more than two thousand years ago, is the one still used to denote that class of insects."

"How very curious," said Pretty Bonnet. "Are there any books about that?"

"Hundreds," said I.

"How very odd that I should never have met with them."

"Not at all, madam," interrupted Lens. "Ladies look upon the grubs and caterpillars from which all moths and beetles are developed merely in the light of nasty, dirty, disagreeable, disgusting things; and therefore they are not at all likely to inquire for books about them——but see! see! the dreadful beetle, in his irresistible cuirass, is uppermost; my brave little Chilo must perish;—yet, no! no!"

Here the omnibus gave a lurch, which greatly assisted Chilo, who, making the best use of the opportunity, darted his sharp, long palpi into a joint of the armour between the back plate and the wing-cases.

"He has got him round the waist," cried Lens. "Plucky little Chilo! he has got him at the insecture!"

"What does he mean by the insecture?" said Pretty Bonnet.

"Our friend refers," I said, "to that deep insection in the form of all creatures of that class which separates the thorax, or chest, from the abdomen. The very term *insect* is founded upon that insection, and is simply an abbreviation of the Latin *insectus*. The wasp, as you must have noticed, is so deeply inserted—or, as you would say, has so slender a waist—that the two portions of the body are apparently only joined by a slender ligament. The term 'entomology,' or 'insect science,' is founded upon a Greek term of precisely the same import, *entos*, which, equally with the Latin *insectus*, means cut in, or insected, as all true insects are. But only look! how furiously they fight while the omnibus is going over these rough stones, positively leaping and plunging at each other like miniature war-horses; only I fear the beetle is getting the best of it, and taking a savage advantage of the opportunity."

"Oh, do separate them," cried Pretty Bonnet; "the beetle will kill the brave little moth."

"No, no," I interposed, "I am not so sure of that; and, then, it is of no use—they had better fight it out. But I do not wonder at your sympathy for the moth. One associates the whole moth and butterfly tribe with ideas of innocence and beauty and sweetness, and the sipping of honey through the fine-drawn tube of their delicate proboscis, from the nectaries of beautiful summer flowers; while beetles, so often black and sinister in their aspect, are more often things of prey, capturing and devouring other insect creatures—the burying-beetles, for instance, that carry off either dead or living insects into their burrows, to feed their young; especially one of the genus Silpha, which feeds on the living larvæ of moths and butterflies, climbing after them into their seemingly safe retreats among the foliage of high trees. Then there is the *Cicindila campestris*, commonly known as the tiger-beetle, from its carnivorous nature, preying, as it does, upon other insects, and occasionally upon its own species. It is as beautiful and as treacherous as the tiger whose name it has borrowed."

"Horrid wretch!" exclaimed Pretty Bonnet.

"But it is in its larva or grub state that its tigerish treachery comes out most strongly. It makes a deep and narrow perpendicular pit, or mine, and then, climbing to the top, stops up the opening with its own flat-topped head, covered with sand, waiting till some unsuspecting insect passes over this treacherous living trap-door, when it at once lets itself drop, followed of course by the wretched victim; and, if the creature so trapped in the perfidious *oubliette* be too large to fall freely, it is seized and dragged mercilessly down to the bottom of the dark cavern, where——"

"How very frightful!" cried Pretty Bonnet, with a soft, sympathising expression, like the glance of "woman pleading for the vanquished" in Etty's famous picture. "But, there! oh, there," she cried, "the moth has the best of it again. Did you see that blow with its little wing? It positively struck the beetle down; and it seems, too, to have wound its delicate trunk, like a tight wire, round the beetle's throat."

"True, true," said Lens; "that wing-blow has won the battle. The wing is the most potent weapon of many creatures: a swan has been known to break a man's arm with a wing-blow. And then,

as you truly say, the little warrior is evidently strangling his great black opponent with his proboscis. Really, the skill of fence with various weapons on both sides, which we have witnessed, is most extraordinary. But, look! the beetle is not idle with his tremendous mandibles, though thrown upon his back. He is still formidable; and I believe that he has just bitten off three of the legs of his antagonist."

"Pray, oh, pray, separate them, then!" cried Pretty Bonnet.

"It is of no use," urged Lens; "the little Chilo has learnt something by experience, and is now keeping his enemy at a greater distance, while beating him over the head with repeated wing-blows. There—there—there! right and left! to stupefy him, till he gets another chance at one of the joints in the armour, when he will, I have no doubt, go in and win. I think," he continued, "that the beaten giant is one of the burying-beetles—perhaps, *Necrophorus germanicus*, the largest of the British species. He intended, most probably, to carry off the Chilo, and bury him in the subterranean larder adjoining his family nursery, as food for his necrophorine offspring; but he is more likely, I think, to get a free burial for himself. See how the brave little Chilo is pegging away at him."

I suggested that the beetle was not so large as *N. germanicus*, and that it was possibly *Necrodes littoralis*, common during June on the banks of the Thames; and, having been brought away by some accident from the neighbourhood of the drowned creatures which form his usual food, he had got frightfully hungry, and pounced upon the little moth as a *dernier ressort*. But, then, I remarked that his form and size was more like *Necrophorus vespator*, only he had not the fine orange markings; perhaps it was an entirely new species, thus accidentally discovered.

"It is, at all events, one of the burying-beetles, or sextons, as they are sometimes called," said I, turning to Pretty Bonnet, "as you may see by the curious brush-like form of its front legs, which enable it to excavate its burrows by brush-work instead of spade-work; and it is most expert in applying the spade-brush principle."

"How very interesting," said Pretty Bonnet; "but he evidently will not have an opportunity of applying the spade-brush principle in the interment of the dear little moth. See, he appears quite exhausted, and is making but little resistance to the continued blows of his brave little opponent."

"You are right," I replied; "whether Necrophorus or Necrodes, he is evidently beaten."

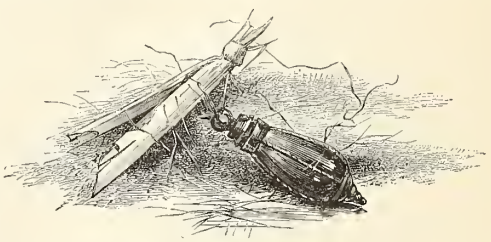
He was, in fact, lying on his back; and so, as an Irishman might use the expressive proverb, was "on his last legs." The omnibus was slackening its speed, for we were approaching the "Swiss Cottage," which is its terminus north-westward; and the motions of the black giant, but recently so vigorous, became sluggish, and almost lifeless; while the little Chilo, like a true Jack the Giant-killer, was as active as ever.

"I am so glad the moth has won," exclaimed Pretty Bonnet, quite beaming at the triumph of her favourite.

But, as the omnibus drew up, the Chilo, too, became less and less active; perhaps from wounds received in the conflict from the possibly venomous mandibles of the beetle, which might be producing an ominous torpor; or, perhaps, excessive over-exertion in defending itself against a too-powerful enemy had overtaxed its powers. However this might be, as the omnibus finally stopped, poor Chilo fell stark and still by the side of its prostrate foe.

"How shocking!" sighed Pretty Bonnet. "Poor things! they are both dead!"

And then we all three stooped down, to take a last look at the brave combatants—but found neither Chilo nor Necrodes! Chilo turned out to be a split straw, with jagged ends for its long, sharp palpi, and an entangled hair for a proboscis. Necrodes was just simply a black silk tag-button from a lady's dress, the ends of silk with which it had been sewn on making the formidable mandibles; while the two, entangled together by a loose raveling of cotton, and jolted up and down by the action of the omnibus, had performed a series of evolutions and revolutions, out of which our active imaginations had conjured up a terrific insect-combat, during which speculations of a supposed scientific character had been hazarded upon "the baseless fabric of a vision."



For a few moments I was quite taken aback by the totally unexpected *dénoucment;* and when I looked round for my companions, intending to offer a few observations to Pretty Bonnet and Lens, in mitigation of our being all three so egregiously "sold" by a button and a bit of straw, I found they had both disappeared; and as the conductor, for the third time (though the first two ejaculations had only reached my perception very vaguely), was calling out to me rather sharply, "Now, sir! we don't go any further," I got at my money as quickly as I could in my then confused state of mind, paid my fare, and moved out of sight of the conductor and the "Swiss Cottage."

H. Noel Humphreys.

A RAMBLE AMONG THE CRIM TARTARS BEYOND THE SEAT OF WAR.

By W. B. Lord, Royal Artillery.

THE torches were still flashing out at fitful and uncertain intervals, and shrill wild whoops were borne in quavering cadence on the sea-breeze as we took a last look from the door of our tent before retiring to rest. We were soon in dream-land, lulled by the even beat of the tiny waves as they fell on the smooth strand below us. The morning was delicious, and a plunge in the fresh leaping water sent us back to breakfast with an appetite which an ogre might have envied. Fortunately, our tenpenny investment was a substantial one, and when cut in thick long strips, and fried with ham, was so excellent as to at once induce us to register a solemn promise to expend tenpence more at the very earliest opportunity. The horses being saddled and a pack-mule equipped, we start for Yalta, and march gaily along over the undulating mounds and breezy downs close bordering the sea. The Pratincoles (*Glareola Torquata*) were very numerous here, and we secured several specimens. This beautiful and interesting bird is aptly described by the trivial name which has been given it, viz. the swallow plover. Skimming along on sharp curved wing with arrow-like flight, or running with surprising rapidity, now stopping to secure some heedless insect, and again starting off in rapid run to fresh hunting-grounds. The Pratincole, in turn, reminds us of both his name-sakes, and with his richly-tinted plumage and elegant form, is one of those charming objects on which Nature appears to have lavished her skilful handiwork. The day owls, too, hovered and sailed along over the low undergrowth, keeping a watchful eye on the bronze-green lizards below, whilst high over-head, like specks in the blue firmament, soared a pair of eagles; down by the shore, in clamorous troop, the snow-white gulls contended for the shoals of silvery fry which each curling wave revealed. Onward we ride, our trusty old gun ready at hand for the benefit of such specimens of natural history as good fortune might throw in our way. We are soon among the vineyards again, and a short ride amongst gardens and tobacco-plantations brings us to Yalta, which is a clean white town without any of the usual accompaniments to sea-side recreation found nearer home; so that we had some difficulty in convincing ourselves that we were in the fashionable seaport of the southern coast. Little appeared doing, as we rode through the deserted streets. Two carpenters we did see engaged in repairing a very small boat, making use of a saw with the teeth set backwards, and dressed in long flax cloth shirts, and boots up to the knees; very easy-going carpenters were these, evidently disposed to make the most of a rare opportunity. Two beautiful egrets stalked along the deserted street on long stilt-like legs, and with sharp peering eye seeking their breakfast.

After crossing a clear rippling brook, in which our friends the egrets are cooling their toes, we make our way at once to the Hôtel d'Odessa, which is as dreary as the City of the Dead. Here we leave our servant and mule, with strict orders that a search should be instituted forthwith for barley, vodka,* lemons, eggs, and bread; all of which were to be procured and packed during our absence. After a cigar and a tumbler of tea with a slice of lemon in it, we are on horseback again, and soon ascending a steep hill at the back of the town. On the left-hand side of the road are some Cyclopean ruins, much like those before described; many of the masses of rock of which they were composed have been broken up and removed for building purposes. In a sheltered dell, not far off, stand some huge and venerable oaks, whilst the neighbouring slopes are covered with magnificent vines. On the very crest of the hill stands a church, built in the Doric style, at the expense of Prince Woronzof. It is constructed on the site of a very ancient structure, probably a temple, from the interior wells forth a clear spring of water, which still flows through an arched opening contrived for it in the wall, and, after furnishing moisture to the roots of the splendid trees growing around the church, joins the little stream in which the egrets were standing, and together empty themselves into the sea. Near this is a whole colony of vine-growers, who have received grants and privileges from the emperor, conditional on the proper cultivation of the vine. Magaratch is the name of the vine-dressers' village; and a very pretty little place it is. Some red wine we were fortunate enough to obtain here was of excellent quality, and much like that produced on the Rhine.

By a short cut, and rather rough scramble, we get back to the road leading to Nikita, the site of the Imperial Acclimatization Gardens; but we have not time to inspect them, so proceed on our journey. A short distance from Cape Nikita, not far from the path, an excellent opportunity is afforded for examining the geological formations of the region through which we are passing. The schist formation here lies between the traveller and the sea-shore; a deposit of sandstone follows; and, crowning all, the piled-up masses of the Jurassic limestone, the material of which the vast cliffs and towering crags we have been journeying through are composed. A short journey from the cape brings us to a valley unsurpassed in fertility and richness—the vale of Ourzouf. This was the "Gorzubita" of the ancients, and here the emperor Justinian sought out a rock of almost impregnable position, on which he built a castle. Its ruins were afterwards taken possession of by the Genoese, who constructed a fort

* Russian whisky.

around them, partly composed of stones from the original structure. In the neighbourhood of Ourzouf there are ruins of the most interesting and extensive character, probably the most ancient in this land of antiquity. Huge piles of massive stones, uncemented, are heaped together, forming walls of immense thickness and strength, dating far beyond the Byzantine, Greek, or Genoese periods; and there can be little doubt but that the Tauro-Scythians were the people who reared them. Below these ancient remains stands the village of Parthenite; and it has been supposed, not without good reason and reliable authority, that the adjacent promontory of Aioudagh—the Kriumetŏpon, or "ram-face"—was the true site of the temple of Iphigenia, and the locality in which her cruel and merciless rites were celebrated, and the spot on which Orestes and Pylades appeared to the goddess, who, with eagle eye, scanned the distant horizon in search of the white sail or tapering mast of the wandering bark destined to furnish fresh victims to the sacrifice, and to add more white bones to those already strewn beneath the giddy crags from which the hapless captive was hurled. Strabo says, in speaking of this promontory, "Far along the Tauric coast there detaches itself into the sea a promontory which looks towards Kriumetŏpon; opposite to it corresponds Cape Carambis, in Paphlagonia; and they divide the Euxine Sea into two parts." At Kriumetŏpon, says Scymnus,* arrived Iphigenia, when she disappeared from Aulis. The Tauri abound here, and their numerous tribes lead a wandering life in the mountains. Barbarians in their cruelties and murders, they adore a divinity which resembles them in its impious crimes."

It is much to be regretted that excavations have not been made in a neighbourhood so rich in antiquarian associations; and there can be no doubt but that most important discoveries might be made, and much light thrown, by the investigation, on passages of ancient history which are now obscure. We would willingly linger longer on such classic ground, but it cannot be. The sun is no longer over head, but warns us by the lengthening shadows that we must retrace our steps to Yalta, and our good horse, whose brown nose has been some time in the mysterious depths of a well-filled corn-bag, raises no objection; so we start at a brisk trot, and reach the Hôtel d'Odessa in the cool of the evening. The steamer to Odessa is just leaving harbour, and things are somewhat more lively than in the morning; still, no one appears in the least hurry, and a very rough and wild-looking subject of the Tzar had established a stall for the sale of hot tea in the very centre of the high road leading to the pier, his somovar giving off steam and smoke enough for a small locomotive engine. Ivan the tea-seller deals in spoons cut from willow-wood, as well as tea, slices his lemons (of which he has a net full) with a knife large enough to take high rank amongst swords, and smokes vile tobacco from a carved root.

As the steamer puffs, smokes, and paddles out to sea, we return to the hotel, where we find our trusty purveyor, with his mule laden, and ready to start. A plethoric sack of barley and two baskets completed the load: one basket contained sundry bottles of vodka tightly wedged in with lemons, the other several dozen eggs packed in hay, whilst a loaf of Russian bread, about a yard and a half long, was lashed fast to the handles. Thus fortified, we marched triumphantly out of Yalta, catching a parting glance of the egrets, who were standing knee-deep in the brook, watching for fish; and seeing them so intent on their evening occupation set us thinking, and we resolved to diverge from our path, pay a visit to the fish-pounds, find a big-booted Zebedee, and lay out another tenpence, in a turbot of tea-tray pattern. So the hard road was soon exchanged for the green sward, and then the soft sand of the beach, along which we bent our way until, in a snug cove beneath the sheltering cliff, we came on a party of the very fellows we were in search of, repairing the walls of their fish-enclosure.

A few minutes sufficed to explain the nature of our requirements, and, displaying the silver talisman, one of our fish-hunting friends shouldered a paddle and went wading and floundering about amongst the terrified turbots, sending them darting here and there in every direction, until gradually nearing the shore, the flat blade of the oar was dexterously shot under a splendid fellow, and out he came, flapping his wet tail at our very feet, and sending the sand flying. This was conduct not to be tolerated by the fishermen, who rapped him on the head in an admonitory manner until he was quite orderly, when, with pieces of twine and a bit of rope, our prize was attached to the corn-sack, our tenpence cheerfully paid, and we were soon on the green turf again, homeward bound, thinking what a capital day's work we had done, when, alas for the mutability of human affairs, the fish's tail got loose; and with the freedom of the tail the taps on the head lost all their effect; the rope became slack; down came the fish under the mule's belly, against which he delivered a whole shower of smacks and flaps. In one minute all was frantic confusion; with a shrill scream of rage and terror the mule sent his heels in the air, and, with his head between his fore legs, sent the sack and baskets flying; lemons scattered broadcast over the plain; long loaf broken in two; hay and eggs, as if some huge bird's nest had been danced on bottles, lodged in the mud, and the wretched fish, the author of all this wreck and destruction, at the end of a yard of rope, still flapping furiously amongst the spilt corn at the mouth of the sack. After much hunting, galloping round, and coaxing, our truant mule was at last secured, and our scattered treasures gathered up. The hard-headed fish was killed in earnest this time, and, together with all the corn that could be scraped up, placed in the sack and repacked. It was dark night before we reached camp, heartily tired, and glad to revenge ourselves on our troublesome fish by eating a considerable portion of him for supper. Our next excursion will be to the city of the ancient Karaite Jews.

* Scymnus of Chio, B.C. 100. See Hudson, Geo. Min.

SULPHURET OF IRON.

The "Mundic" of the Miners.

By W. B. Lord, Royal Artillery.

"ALL is not gold that glitters;" yet the bright yellow spangles which shine so brilliantly amongst the black treasures deposited in our coal-scuttles, appear to the unpractised eye uncommonly like it. No golden grains are these, but a combination of iron and sulphur, innocent enough when united, but, separated by the agency of heat, such sulphurous fumes are poured forth as to make you devoutly wish that no dissolution of partnership had ever taken place; and the careful householder who, tongs in hand, and with slippered feet, yawns sleepily as he rakes the last glowing embers from the grate before retiring for the night, feels naturally indignant at being taken sharply by the nose by Mr. Brimstone, who fiercely resents the intrusion, attacking our nervous friend's air-passages in a manner not to be endured, and making him cough most heartily, and probably exclaim, "*Dear me!* where on earth can all the brimstone come from?" Simply then from its former partner, *iron*, who rests quietly in the form of oxide, amongst the ashes. Few substances are more widely disseminated amongst the mineral productions of the earth than that now under consideration, and from the destructive effects produced on the metal iron when undergoing metallurgical treatment, by the sulphur set free from the fuel, and the contamination produced amongst other metals by the sulphuret (consisting of two atoms of sulphur with one of iron) mixed with them, that it may be almost looked on as one of the greatest enemies the metallurgist has to contend against. A very simple experiment will serve to show how readily sulphur and iron unite when the latter is heated. Place an ordinary bar of iron, say the size of the middle finger, in a forge fire until it is at a bright red heat; when withdrawn, hold it in contact with a stick of common sulphur. The two substances will immediately fuze together and drop away like sealing-wax, until the bar is divided and falls asunder. The drops which have fallen are no longer iron; it has united with the sulphur and become brittle, and perfectly useless as a metal; in fact, it is no longer one. Many of the sulphurets of iron found by the miner in his search for mineral ores are exceedingly curious and beautiful, filling at times some cleft or cavern amongst the rocks with crystalline forms, so brilliant and exquisite, that we are almost led to believe some royal Kobold of the mine had here stored up his elfin regalia, or that the lamp of Aladin must have been, after all, a "*Davy lamp*," and his cave of jewels a cavity in some deep mineral vein. Troublesome and unprofitable as sulphuret of iron sometimes is, it is at others usefully employed for many purposes connected with arts and manufactures. The property which it possesses of emitting numerous sparks on being struck sharply against steel, obtained for it the name of "Pyrites," which is still frequently made use of. The wheel-lock pieces, used after the matchlock, and before the introduction of the flint-and-steel gun, were so constructed that on pulling the trigger a small roughened steel wheel, which, acted on by a spiral spring, wound up much after the manner of a clock, revolved rapidly against a fixed fragment of sulphuret of iron, thereby producing a stream of sparks and igniting the gunpowder placed in the pan beneath them. Although never treated with a view to the production of iron, the sulphur, we have already shown it to be rich in, is taken advantage of in the manufacture of both alum and sulphuric acid, sulphuret of good average quality producing about seventeen per cent. of sulphur more or less associated with arsenic. This, when burnt, leaves a large residue in the chamber or retort used in its treatment. On being removed, it is thrown together in heaps and exposed to air and moisture. Oxide of iron and sulphuric acid are thus formed, which unite and produce a soluble salt,—the common copperas, green vitriol, or sulphate of iron of commerce. This, when collected in proper receivers, is crystallized on branches of trees or strings, and is extensively used in dyeing, the manufacture of ink, &c. &c. The pigment, or colour commonly known as "colcothar," or "purple-brown," is obtained from the refuse matters remaining in the heaps after the soluble salt has drained off. We have at times detected small quantities of gold and silver amongst such refuse; but, as a general rule, too minute in quantity to render its extraction a profitable undertaking. In Bohemia, considerable quantities of gold are obtained by reducing the sulphuret to an almost impalpable powder, mixing it with water, and then causing "the slimes," as the mixture is called by miners, to flow through a number of wooden basins, placed on the slope of a hill; and here it is ground with mercury. This immediately seizes on every stray particle of gold it can catch (taking it into custody, so to speak), and forming what is called an "amalgam." After some time the mercury, with its prisoner, is drained off, placed in a leather bag, and squeezed. The mercury forces its way in thousands of silvery globules through the pores of the leather, leaving the gold behind, a putty-like mass in the bag. This is heated to drive off superfluous mercury, and afterwards melted and refined.

It sometimes happens that the process of decomposition and conversion of the "sulphuret" of iron into the "sulphate," takes place deep down amongst the coal-measures, where such intense heat is generated as to cause spontaneous ignition of the

beds of coal with which it is associated. We often find, too, by the working of the strange and inscrutable laws governing the earth's chemistry, such laws as those by which the pure flint is deposited on the wheat straw and the feathery reed; the morphia to dwell within the juices of the gaudy-painted poppy; the life-saving quina amongst the cells and fibres of the "heart-leaved cinchona," and the deadly strychnia in the vomic nut of India,—that casts of extinct creatures, Ammonites, and shells of past geologic ages, have been completely filled as by molten bronze, with glittering sulphuret of iron, accurately filling the space once occupied by the living mollusk. Deep buried amongst the shale and schist beds, far down amongst the slate rocks, and imbedded in the chalk and indurated clay, lie these sulphurets. How they reached the strange positions in which they are found, who can say? Mr. Pepys, in 1811 (*Transactions of the Geological Society of London*, first series, vol. i.), was amongst the first to publish a very illustrative case of the formation of iron-pyrites from the decomposition of the bodies of some mice in a solution of sulphate of iron. Another illustrative instance of the formation of iron-pyrites upon animal matter in a decomposing state occurred at the bottom of a mine shaft near Mousehole, Cornwall, where a dog had fallen into a solution of iron, and its body was found surrounded by iron-pyrites. In these and other well-known cases the hydrogen evolved from the decomposition of the animal matter is considered to take the oxygen both from the sulphuric acid and oxide of iron, so that the iron-pyrites, or bi-sulphuret of iron, is formed. Mr. De La Beche thus accounts for the formation of the sulphuret, and there is no doubt but that under certain conditions it might be formed as he states. Yet, when we see the most minute and delicate flutings, on the surfaces of shells, not thicker than tissue-paper, as faithfully moulded in bright shining sulphuret as though cast from molten metal by the hands of some expert goldsmith, we are rather at a loss to understand where, in a structure so delicate, enough iron and animal matter can be found to bring these strange changes about; and this, like many other secrets of nature—the origin of "meteoric stones" amongst them, must remain for time and careful investigation to elucidate.

ON SKETCHING FROM NATURE.

By Aaron Penley, Professor of Landscape Painting at the Royal Military Academy, Woolwich.

No. IV.

IT has been my purpose to deviate a little this month from the out-door sketching, because I am desirous of combining the character of the three previous subjects, and so afford to many of your readers an opportunity of putting into practice the several objects before noticed.

There is in this drawing, scarcely anything but what may be deemed local, and that of such size as to give free scope for copying *forms* with literal correctness. I use the term "literal correctness," as rather implying a truthful impression, than that elaborated and minute attention to individual detail which is now generally understood by the word "Pre-Raphaelitism." Each portion of the cottages, for instance, is to be carefully drawn in with the black-lead pencil, showing the various demarcations of thatch, wood, and stone. Nothing is more improving in a manipulative point of view, nor, indeed, in an intellectual one, than this kind of practice; for there must of necessity be much thought brought to bear on giving to each object and every part of it, a veritableness of resemblance, so that there can be no mistaking the thing intended.

Over and over again do I hear the remark, "I thought it was not requisite to draw so much with the pencil, when there was colour to be put on." A greater mistake than this there cannot be, for if colour has to be used, it is essential that the precise position for it should be accurately marked and well drawn; inasmuch as the pencil is often of the greatest use in keeping up the crispness of outline definition. This cannot be too much insisted upon, it being by the pencil that the first impression has to be made and the foundation laid for success in after treatment. To each stone there is a form; to each branch there is a form; to each patch of grass there is a form; the chimney, the windows, the thatch, the old broken door, the boat, all have forms peculiarly their own; and it is only upon a just regard to each that they can be presented to the spectator in an intelligible and agreeable manner, and the end be at the same time attained of investing the scene—be it what it may—with a truthful character. I fear that some may think I have dwelt almost too much upon a careful pencil outline; but this is of such importance to a successful drawing, that it were far better I should appear too particular than not be particular enough; and I therefore repeat that nothing lies nearer the root of failure than a vague and hurried outline; while on the other hand, an industrious and a carefully studied one, is perhaps the greatest ingredient in success.

The subject for this month's magazine is given with great clearness of form throughout. The light and shade, as well as contrast of colour, are sufficiently pronounced to convey the idea of breadth, and at the same time to keep transparency in every part; that is, to give colour and depth without a tendency to blackness. The sky is of a cool grey, for the purpose of showing the warm colouring of

the cottages to greater advantage. Whenever there are masses of tones inclining to orange, citrine or red, it is necessary to have some corresponding masses of grey, in order to establish a requisite amount of repose and quiet; but these must be so treated as not to disturb or check the harmony by a suddenness of transition.

The dark tones of the clouds are repeated by the shadows on the mountain at the opposite side, the warm tints of which also repeat in a subdued degree the orange and laky hues of the thatch. These are again diffused over the walls of the cottages by the colours of the stones, and the grey shadows of the walls being warmer than the clouds, are adapted to cause them to advance, especially as the several glazings introduced are calculated to cause the eye to traverse over the whole breadth in an agreeable manner. It is to the decided edges of these shadows that the gleams of sunlight depend for their "catchy" vividness. The upturned boat, being separated from the cottages and the shadow of the road, partakes of the warm grey, so giving a second mass, although but a small one, and produces a circular form to the composition by its connection with the stony portion of the ground to the right. The highest light, which is to be found on the left cottage wall, between the window and the door, is caught up by the upper part of the post supporting the wall, and repeated on the figure of the woman over the boat, and again by the chimneys, and then passes off in the light of the sky. Indeed, every light—as every colour—has its purpose, and it would always be well that, when copying a drawing, the pupil should study it carefully in all its parts, and endeavour to discover the intention of the artist. The two bright "bits" of orange-colour in the instance I have given, serve to illumine the scene and carry force by contrast although they are so small. The dark blue coat is also valuable to bring depth into the right portion of the picture, as well as to throw the background into distance. In the trees there is much variety of colour, light, shade and form. I preferred massing the foliage, thinking it better to do so, and have only introduced a few slight branches at the right extremity to give lightness and to indicate the effect of wind upon them. The grass on either side is so marked in its several contours, as to show the character of the ground upon which it grows. I have omitted any detailed account of the progressive "washings-in" of colour, having a desire to exercise the ability of the pupil in this respect; nevertheless, I subjoin a list of the combinations of the various tints to be employed—

Clouds—Cobalt, yellow ochre, and a little lake.

Mountain—Cobalt, lake, yellow ochre.

Distant Trees—Yellow ochre, cobalt, and a little lake, glazed with gamboge in the light parts.

Near Trees and Grass—Gamboge, burnt sienna, and indigo, varied.

Thatch—First Tint—Yellow ochre, lake, and cobalt, varied.

Shadows and Deep Markings—Burnt sienna, lake, and indigo, with a little brown pink.

Glazings of Yellow Tones—Raw sienna.

Shadows of Wall and Road — Burnt sienna, lake, and indigo, with glazings of burnt sienna, lake, and brown pink where required.

All the dark markings are touched in with the same colour, used thickly or in a pulpy condition. These touchings are of several depths, and can only be effected by a repetition; each being smaller in succession.

I would strongly recommend all who really wish to succeed in water-colours to copy this drawing more than once, it being calculated to afford improvement.

ART NOTES FROM THE CONTINENT.

By G. W. Yapp.

THE result of the voting for the award of the two Medals of Honour at the Salon, Paris, was as pretty generally expected, that no artist obtained a sufficient majority, and therefore no grand prize was given. On the whole, the critics and the public have corroborated the decision of the elective artists, that no work exhibited this year deserved such a special distinction, but still the fact that a high reward falls to the ground is not a pleasant one either in an artistic or patriotic point of view, and faults are found with the regulation which gives the franchise, in this case, only to those artists who have themselves received certain distinctions, and who therefore form an aristocracy in the world of art. A considerable party advocates universal suffrage, and would like to see every exhibiting artist qualified to vote for the award of the two great annual prizes. Undoubtedly the expression of opinion thus obtained would be much broader in its scope, and considering that the ideas of art at the present moment are certainly more elevated, or at any rate less hampered by conventionality than they were when the greater part of the older artists were students, and that, generally speaking, ideas and aspirations are purer and higher at the outset in life than when the artist has had to grapple with, and perhaps been forced to bow down before, the terrible exigencies of practical existence and the temptations that beset the artistic career, there would be no reason, perhaps, to fear that the prizes of honour would be awarded to an unworthy candidate. But, although the Imperial Government, in matters of art, exhibits a desire to conciliate the rising generation, and to popularize the regulations respecting art and art education, it seems almost too much to expect the Ministry of the Beaux Arts to place the disposition of the great prizes in the hands of the whole

of the exhibiting artists. It cannot be taken for granted that the majority of those whose productions are admitted annually by the jury for exhibition are artists in the highest sense of the word, and it can scarcely be said that the painter of a mediocre portrait, a bunch of flowers, or a bit of still life, is necessarily a judge of the higher qualities of art. It was a great step in artistic legislation to place the ballot-box in the hands of the body from which the laureates were to be selected, and it might be the means of bringing about failure and causing a retrograde movement were the artistic franchise to be lowered. The body of young artists might, perhaps, be more free from prejudice and *camaraderie*, and even more elevated in their views, theoretically, than their elders, but they would certainly be at least as liable to be led astray by enthusiasm, and would be less regardful of the views and opinions of the outer artistic world.

Whatever may be the opinion respecting this important subject of artistic self-government, if we may so call it, the arrangement by which no prizes are given until the term of the exhibition is half expired, when not only artists and critics, but the public at large, have had full opportunities of saying what they think of this or that work of art, is one which has given universal satisfaction, and must, we are convinced, if persisted in, prove a most valuable means of general art education; for if the interest of the ordinary spectator is naturally drawn towards those works which have been crowned by the jury, his judgment is far more satisfactorily employed and cultivated by trying to mark out for himself the works which will be so rewarded. The liberal regulations which were adopted three years since, and which place the election of three-fourths of the members of the juries entrusted with the admission or rejection of the works presented, in the hands of the artists themselves, has almost entirely swept away every complaint on that head, and thus removed a cause of considerable irritation, and we believe that the other changes to which we have referred are destined to produce most beneficial effects in all directions. We trust that the art authorities and legislators at home will study the progress and effects of these reforms with care, for they are being tried in a bold manner and in a wider field than we have to experiment in. Art education is no chance accident, no hot-house plant; it will grow vigorously or feebly like other things, accordingly as it is encouraged or protected, aided or coddled.

An interesting discovery has been made at Nancy: in removing a chapel erected by Henry de Ville, Bishop of Toul, between the buttresses of the cathedral, some mural paintings, long hidden beneath coats of whitewash, have been brought to light. The paintings recall the manner of the Italian school of the fifteenth century, and especially that of the Fra Angelico. They exhibit highly finished execution, and much vivacity in colour, and, as otherwise they would have been destroyed, an attempt is to be made to transfer them on to canvas for the museum of Nancy.

In the beginning of the present year, a successful bronze casting was made of the famous "David" of Michael-Angelo, at Florence; it is now proposed to substitute this reproduction for the original, which has stood so long exposed to all changes of weather, and to place the work of the great master's own hand in the gallery of the Palace of the Podesta. With this view a commission has been appointed, and the "David" is now surrounded by a hoarding, in order that careful experiments may be made, to ascertain whether there will be any danger in removing the statue.

The restoration of such edifices as the church of Notre Dame in Paris, and that of Saint Denis, has always at once a charm and a terror in the eyes of artists. It is charming to see the veneration that preserves such beautiful monuments of the art of a bygone day, terrible to think what infidelities the restorer may be guilty of. If we except the replacement of that abominable Louis-quatorze altar, and its glaring incongruities, the restorer has done his work faithfully and skilfully at Notre Dame; but it is not of the Metropolitan, but of the equally celebrated provincial church of Saint Denis that we have to say a few words at present.

The works have been going on in the latter for several years under the direction of M. Viollet le Duc, and are now approaching their termination. The object in view is true restoration; the sweeping away of the accumulations of those truly dark ages in architecture, when Gothic cathedrals were converted into Composite—Composite is the only word—and lancet-shaped windows were trimmed up with Corinthian colonnades, Roman garlands, and rams' heads, and the reproduction, as far as possible, of the edifice of the thirteenth century. Few fine churches have been worse treated than Saint Denis; it has been chipped, and altered, and decorated, and redecorated in the most barbarous manner. The walls of the chapels of one aisle had all been thrown down, and the space enclosed for service in cold weather, utterly destroying, of course, the symmetry of the structure: this part is to be restored to its original condition. This is natural and comparatively simple; but the rendering homogeneous all the parts of a structure, erected at various periods, is a difficult matter. For instance, the great sacristy was built in the time of the Empire, and the assimilation of this to the style of the church itself is a difficult task. The pictures by Guérin, Gros, and other painters will, very properly, be taken away and placed in the Louvre. The vaulted roof of the nave is to be painted and picked out with flowers in the style of the time of Philippe le Hardi; and the floor of the choir, which was so high as to spoil the proportions of the pillars, has been lowered. The grand altar has been reconstructed in the style of the thirteenth century. Beneath is the famous crypt which once contained the ashes of a long line of kings: this has been completely restored, and the tombs are now being replaced. That of Dagobert, the only one yet

finished, will be followed by those of Louis XII., Francis I., and Henry II., and opposite to Dagobert's will be erected a tomb to receive eventually the remains of Napoleon I.

The chapel to the right of the sacristy, which is known as that of the Grand Constable of France and has a separate crypt of its own, is being completely restored. This chapel dates from the fourteenth century. A very rich leaden coffin was found near the spot, which is supposed to be that in which the famous Duguesclin was buried.

Only one of the two towers over the western façade of the edifice remains entire, and that is in such a bad state that the upper part is to be taken down, and both completed after the foundations have been made secure. The famous historical church of Saint Denis will be well worth a visit next year.

The restoration of the grand works of the Freemasons of the thirteenth and fourteenth centuries, brings to mind the laudable attempts which are being made in France to resuscitate the art of which they form such brilliant examples. The Central School of Architecture, established two years ago, is working earnestly in this way. The new school is intended to do what, unfortunately, academies have rarely done here or elsewhere, that is to say, combine sound practical instruction with theory in the education of youth for the profession of architecture: in the classes and *ateliers* they learn the principles of construction and their application, in the lecture-room they listen to the expositions of the ablest men of the day.

A few extracts from a recent lecture on the *Renaissance*, delivered in the school, will not be uninteresting:—"To understand this epoch," said the lecturer, "it is necessary to take a glimpse at the two centuries which preceded it. After the Crusades all the institutions sprang into new life; the taste for letters, arts, and sciences began to sow the seed of the Renaissance. The thirteenth century was a moment of wonderful intellectual blossoming; there was more philosophic impulse in 1250 than there was in the time of Louis the Fourteenth. But, in the following century, literature fell ill of the same malady that attacked architecture and philosophy—of *subtlety*. In the poems of the time there was nothing but clever embroidery: subtlety, the mistress of the ingenious, dried up the true sources of poetry. The philosophers took up the text of Aristotle or of the Bible, and argued till they lost themselves. They did not study man; the facts and real interests of society had no attraction for them. No one at that period saw things as they really were. Nature was effaced by an artificial substitute, subtle, but utterly incapable of producing anything good. The malady of the epoch was a progressive subtilization of the human intellect. The renaissance which had begun to spring up in the thirteenth century failed: the scholiasts had a large hand in the miscarriage. Literature had become a mere mosaic of words. The poems of Charles d'Orleans, for example, full of finesse, were completely wanting in elevation. One bore at its head the following notice to the reader:—'The words of this poem may be arranged in twenty-eight different ways.' There was nothing manly in them; sparks without fire, sensibility without emotion." The lecturer might have added that, contemporary with the poet of the royal house of Orleans, lived and wrote, in abject poverty, one of the most original-minded of poets—François Villon, the author of the *Grand Testament*—whose poetry is now the wonder and the delight of critics, but for whom there was no audience in his own time. Villon dared to think for himself, and to pen what he thought; his cloth was woven of real materials, and the workmanship was as good as the wool, but he omitted the embroidery, and he became a vagabond on the face of the earth; contempt drove him to misconduct, and he is said to have written one of his finest poems a prisoner at the bottom of a damp hole down which his bread was thrown to him as to a dog. There is, however, a bright ray thrown over the last days of poor Villon; after all his sufferings, no one knows now by whose means, he was rescued from his misery, and was enabled to pay a visit to England, an undertaking at that time which required both time and money. But it remained for the nineteenth century to find out the value of his poems.

The later Renaissance, the true renaissance, was that which occurred in Italy. "Already, in the fourteenth century, Boccacio and Petrarch did due honour to the Greek and Roman art. Distinguished minds gave themselves up passionately to the study of the ancients. In 1450, eyes were bright, ears quick, all the senses eager for impression, mind was re-awakened; no hesitation, no reticence, now—the ardent nature of man unfolded itself in the sunshine, eager to cull all the flowers of life.

"Two causes marked out Italy for the centre of the Renaissance. First, the development of the communal system. The hardihood, the freedom of manners, the independence of the inhabitants of the Italian towns, contrasted strongly with the timidity and the pusillanimity of our burgesses in their attempts to establish communes in France. They were accustomed in Italy to the sensation of strong feelings; and it is certain that reflection on profound sentiments produces the fine arts. If the epochs which had preceded the Renaissance had been calm, we should not have had that noble array of artists which characterized the fifteenth century. The second cause which favoured the introduction of the arts into Italy was *luxury*, with its accompanying leisure and the general well-being which allowed it to be regarded without jealousy. Wealth had grown out of commerce with the East, and luxury became remarkable in Italy about the middle of the century. All classes felt a thirst for new sensations; nothing could outweigh this longing for enjoyment.

"In 1453, after the taking of Constantinople and the fall of the Eastern empire, the Greek *savants* and artists fled to Italy from the tyranny of the Turks. They carried with them many treasures, and gave a new impulse to the taste of the day.

The Medici aided the intellectual movement. Enthusiasm for letters and the arts seized upon the courts of Milan, Mantua, Urbino. . . . . It was the epoch of the most brilliant literary and artistic development in Italy, the moment of her regeneration.

"That which is especially to be remarked is that, at that time, there was great interest shown in the visible qualities of things; men began to see what was around them. Forms, colours, lines, attracted admiration; and the taste for what attracts the eye is always intense. It was in the midst of this enthusiasm for nature that arose that grand Italian art which is known as the Renaissance."

The views of the lecturer are in some respects novel, and his words are not likely to be less effective because open to discussion; they contain for the present day a lesson and a warning.

Is there a renaissance going on now, or do we want some new and great events to rouse the human mind to grand design? Will Italy once more light the sacred fire?

FOREIGN ARCHÆOLOGICAL NOTES.

THE study of archæology and the collection of objects of antiquity are certainly growing more and more into favour.

The collection of medals, cameos, small bronzes, and other objects of art belonging to the Bibliothèque Impériale is well known to all connoisseurs; but this collection is now thrown open to the public in a separate gallery in the new buildings of the establishment, and the objects themselves are seen to far greater advantage in the new museum than they were in the sombre rooms of the old palace of Richelieu.

In the largest compartment of the new gallery, a noble room, is a central case which is the object of the greatest attraction. This case is divided into seven compartments, each of which holds one celebrated object of *virtù*. First there is the famous cameo of the Sainte Chapelle, as it is called, a sardonyx eleven or twelve inches in diameter in each direction, and having five distinct strata, on which is engraved the Apotheosis of Augustus. The design is divided into three scenes: in the first the Emperor is carried to the foot of Jupiter's throne by Pegasus, and received there by his, asserted, ancestor Æneas; in the central compartment the family of the Cæsars is collected around the Emperor Tiberius, seated on a throne, while Drusus points out the triumph of the great Augustus; in the lower division of the work, German and Oriental captives, men, women, and children, the trophies of Germanicus and the younger Drusus, prostrate themselves at the feet of the family of Tiberius. The history of this cameo is curious; it is said to have been executed at Rome in the time of Tiberius, and to have remained in that capital until Constantine took with him a part of the imperial treasure when he raised the new empire on the banks of the Bosphorus. The cameo was amongst these treasures, and was eventually purchased by Louis IX., of the Emperor Baudouin. When brought to France, the savants pronounced the subject to be that of the flight of Joseph into Egypt, to which, unless you discard all costume and emblems, it has no manner of resemblance; however, as such it was placed in the exquisite little Sainte Chapelle, built by Saint Louis to receive the relics brought by him from the Holy Land, and there it remained for years, the emblem of pagan triumph surrounded by the relics of Christianity in a Christian chapel. Such was the celebrity attached by the Christian world to the *grand camaïeu*, as it was then called, that the Pope desired to see it, and it was sent to Rome in the time of Philippe VI., and not replaced in the Sainte Chapelle until Charles V. came to the throne. No suspicion, or no hint, of the real subject of the design seems to have been raised or given in Rome, and the cameo remained amongst the relics until archæologists began to discriminate between Romans and Easterns, or until churchmen would give ear to archæologists. It was only in 1791 that it was transferred to the gallery of antiquities in the Bibliothèque Royale. A few years afterwards it was stolen and offered for sale to a jeweller in Holland; but he recognized it instantly, and caused the thief to be arrested and the cameo to be restored.

On one side of the great cameo is a noble sardonyx cup mounted in gold and decorated with precious stones; this belonged formerly to the church of Saint Denis, and was called the Gondola from its elongated form.

In the division on the other side of the central object is a massive gold plateau, with a Latin cross in the centre, composed of pieces of red glass and a gold ewer. These curious objects were found, with a quantity of Roman money, near the church of Gourdon, in the Côte d'Or, in a hole covered by a large brick, or rather tile, where they are supposed to have been hidden in the time of the Merovingians. It should be mentioned that the discovery was not purely accidental; there was a tradition afloat in the neighbourhood that a treasure was buried near the spot, and many previous attempts to discover it had been made without success.

Another of the objects in this central case is the so-called Patera of Rennes, a massive golden *tazza* or *coupe*, beaten out with the hammer, and bearing as decorations a bas-relief representing the conflict of Bacchus and Hercules, and sixteen gold medals of the Roman emperors. It was found, with some

other objects, six feet below ground, during the demolition of a house at Rennes, in the year 1774, and presented to the king.

Next is a small bust in agate, which originally formed the top of a staff carried by the leader of the choir in the Sainte Chapelle. The bust has been supposed at various times to represent Saint Louis, the Emperor Titus, and Constantine the Great.

Another very curious object is a noble plateau, having eighteen medallions in rock crystal and coloured translucent glass. In the centre is a medallion representing an Oriental personage seated on a throne: this is said to be the Saracenic king Chosroes. This plateau was presented to the Abbey of Saint Denis by Charles the Bald, and it remained amongst the treasures of that monastery for a thousand years, under the denomination of *Solomon's Cup*. How it fell into the French king's hands is not recorded.

The last object in this cabinet of jewels is also from Saint Denis, one of the finest known cups in Oriental sardonyx; the material is beautiful in itself, and the workmanship worthy of it; the cup and its handles are all formed out of the solid block, and the sides are decorated with Bacchanalian scenes in bas-relief. It is known as Ptolemy's cup, and it is conjectured to have belonged to Ptolemy, the husband of Cleopatra, who was surnamed Bacchus, and whose vases are described by Athenæus. Others have called it the cup of Mithridates. Whatever be its origin, it is a right royal cup. It was consecrated to Saint Denis by one of the Carlovingian kings in the ninth century, and tradition says that in olden times the queens of France, on the day of their coronation, drank the consecrated wine from this imperial chalice.

The collection of medals, engraved stones, and antiquities, has been greatly enriched by the donation of the fine museum of the Duc de Luynes, which includes many Greek coins, cameos, intaglios, vases, and engraved cylinders.

Another very fine collection, that of the late Vicomte de Janzé, left by will, with important additions by his widow, has been added to the new gallery. The Vicomte de Janzé's museum was one of the most celebrated private collections in France; and the portion presented to the Bibliothèque Impériale includes, amongst other objects of interest, no less than 89 bronze statuettes, and 81 works in terra-cotta. Amongst the former are the following celebrated pieces:—Sophocles, seated; the Etruscan Apollo; the Diadumène; Adonis; Venus and Cupid; a Muse wearing in her hair a feather taken from a Siren; Alexander the Great; the Etruscan Athlete; Jupiter; and Minerva Promachos, antique style. Among the terra-cottas are pieces equally celebrated; such as the Venus, Hebe, and groups of Europa, of Cupid and Psyche, and of Proserpine gathering flowers in the fields of Enna.

The museum of medals has also received valuable additions from the Comte de Nieuwekerke, Mr. Waddington, and other collectors.

The Duc de Luynes has also presented a magnificent Arab sword, the scabbard of which bears, on a plate of enamel, the device of the Moorish kings of Granada: it is said to have belonged to one of the last kings of the dynasty of Beni Nasr.

M. Blanchard de Farges has presented to the department of engravings 110 plans, designed by Le Notre and Mansard, or under their direction, for works in the palaces and gardens of Versailles, the Trianon, and Saint Germain, together with two inventories in MS., one of which is annotated by the hand of Louis Quatorze, of the apartments at the Trianon and Saint Germain in 1684 and 1685: these lists come direct from the family of Le Notre.

Many other donations have been made to the new galleries, affording another proof of the immense wealth that pours into a national collection when a suitable establishment is prepared for its public exhibition.

Another museum is to be opened on the 15th of August, in the establishment of the Imperial Archives; this will contain a curious collection of manuscripts, seals, and other interesting archæological curiosities. The gallery devoted to the purpose formed the apartments of the Princess Rohan Soubise, to whose family the edifice belonged. The wood-work of the rooms is said to be of great beauty and in perfect preservation.

Still another collection of antiquities is being formed at the Hôtel de Ville, under the direction of Baron Haussmann, the Prefect of the Seine. This will be confined to objects illustrative of the history of Paris, of which large numbers are in the hands of the municipality and of private individuals. The authorities have purchased the collection of M. Legras, rich in manuscripts, seals, ancient leaden medallions, badges, and emblems and other curiosities, and have secured a fine mansion for the new museum.

Lastly, the fine old château of Saint Germain is being rapidly restored, and will be devoted to a collection of antiquities illustrative of the history of France.

A number of tombs have been uncovered by accident in the commune of Griel, in the canton of Eu; they are supposed to belong to the Frank or Merovingian periods of the seventh and eighth centuries. Vases in red and black pottery and *scramasaxes* were found near the tombs, and it is remarked that some of the vases and arms were outside of the coffins.

At a recent meeting of the Academy of Inscriptions, M. d'Archiac presented a curious ancient work of art, a design engraved in line on a piece of schist, greyish-green in colour, micacious, lustrous, and very close in the grain. The lines are firm, well drawn, and equal throughout. The design represents a bear walking; the outline is good, the ears and eyes well placed, and the proportions observed throughout. The stone measures about seven inches by four, and was found in the lower grotto of Massart, in the Ariége, in the midst of a large quantity of bones and flint implements.

Two leaden coffins were found the other day by

men employed in making a new sewer in the rue de Turbigo, in Paris; both contained human bones, but one only had an inscription, which runs as follows:—

"Ici est le corps de très-haute et très-puissante dame madame Suzanne Garnier, veuve de très-haut et très-puissant seigneur messire Charles de Brancas, comte de Villars, chevalier d'honneur de la feu reine, mère du roi Louis XIV, lieutenant-général des camps et armées de Sa Majesté. Au jour de son décès âgée de LIX ans IX mois, décédée le 11e jour de novembre 1685, à huit heures du soir.—*Requiescat in pace!*"

The Comte de Villars was the son of Julienne d'Estrées, daughter of the Marquis de Cœuvres, and sister of the too celebrated Gabrielle d'Estrées, and died in 1681: it is supposed that the second coffin contains his remains. It is curious that the coffin containing the relics of a countess of Choiseul-Beaupré was found about five years since side by side with another bearing no inscription, which was also conjectured to be that of the comte. The family of the Comte de Villars mentioned above is extinct.

Some interesting Roman antiquities were dug up a short time since at Vienne, in the Isère; amongst the most important are the following bronzes—a Hercules, about a foot high, covered with a lion's skin; another Hercules, smaller in size, wearing a coat of mail like that of a Roman knight; a small panther, with one paw on a round ball, and a collar of ivy around its neck, evidently one of the beasts of Bacchus; and two small Mercuries, one bearing a caduceus in silver; besides a quantity of sacrificial knives, spring scissors, lamps, hinges, and a mass of fragments of silver vases and other objects.

A mosaic of the thirteenth century has been discovered in Rheims, in which are two medallions, one representing Abraham with a sacrificial knife in his hand, and the other Isaac. The pavement is nearly five feet below the present surface of the ground, and is in perfect preservation.

The museum of Strasbourg has been enriched by a very rare and curious bas-relief found in the heart of the town. It is more than two feet long by sixteen inches wide, and represents Mithra, a Persian divinity, attached to the worship of Zoroaster, and who, introduced into Rome under Pompey, penetrated about the third century of our era with the Roman legions into Germany.

MARKS AND MONOGRAMS, POTTERY AND PORCELAIN.*

WHEN the mighty editor of the *Eatanswill Gazette* poured into the astonished ear of the admiring Pickwick the instructions given to his critic for composing his famous article on Chinese Metaphysics, he enunciated a principle which, however absurd may have been his application of it, we are bold enough to ask our readers to follow with us on the present occasion. Mr. Pott's directions, it will be remembered, were to "cram" by reading in the "Encyclopædia Britannica," for "Metaphysics" under the letter M, and under the letter C for "China," and to combine the information thus acquired. What is now proposed is so far in agreement with this original theory that Pottery, Porcelain, and the marks and monograms by which the various productions of such ware are distinguished, will be considered in order. We must, however, in the present number, confine ourselves, after a few general introductory remarks, to some observations on the essay on "the *Vasa fictilia* of England" prefixed to the volume. We shall thus, too, be adopting, in great part, the plan of Mr. Chaffers's interesting hand-book, which, though its title (with the exception of the "*Vasa fictilia*") might lead one to expect little beyond a dry but useful catalogue of marks and monograms, will be found to contain much valuable information, not only for professional and amateur collectors, but also, though in a somewhat less degree, for the student, the manufacturer, and the general reader. It is for the last that this article is chiefly intended; and it is with the productions of pottery and porcelain as *works of* ART that we specially concern ourselves. Those who desire ancient classic lore connected with the subject, or information on the mechanical contrivances and chemical combinations employed in fabrication, will require far more than can come within the scope of our article, or, we may add, than Mr. Chaffers's book can afford. Such may be referred to more learned, elaborate, and scientific treatises, as, for instance, Birch's "History of Ancient Pottery," and "Traité des Arts Céramiques," by Brongniart, which are mentioned, amongst many others, in the most useful though almost formidable array of books of reference, occupying four pages, which follows the preface. Those, again, who wish to inquire into the "History of Pottery and Porcelain, Mediæval and Modern," cannot do better than peruse, and if possible, obtain as a permanent possession, the charming volume of that title, by Mr. Marryat. It contains, in a condensed form, information of the greatest interest on the subject, and is written in so pleasing a style, and is so replete with exquisite illustrations, as to be an ornamental as well as literary addition to a drawing-room library.

It is scarcely necessary to insist on the extensive and increasing interest taken by the public, and

* *Marks and Monograms on Pottery and Porcelain*, with Historical Notices of each Manufactory, preceded by an Introductory Essay on the Vasa Fictilia of England, and followed by a copious Index. By W. CHAFFERS, F.S.A. Second edition, considerably enlarged. (London: John Davy & Sons.)

especially by the British public, in works of design and colour, or on the greatly improved taste of producers and purchasers of both useful and ornamental fabrics, acting and reacting on each other. *Taste* seems no longer to be an esoteric secret, restricted as the happy possession of a few elegant dilettanti and frequenters of Christie's in the season; and in no one article of manufacture has the general improvement been more remarkable than in that of fictile ware. It has become the habit to use the terms *art* and *manufacture* as distinct, even if not contradictory, and the distinction is doubtless partly justified by art having been so often and so long painfully "conspicuous by its absence" (to use Earl Russell's famous bull) from English manufacture. The French, more logical and scientific in their language, have been happier in the nomenclature, assigning to the same distinct ideas the terms *art* and *métier*. The distinction as ordinarily expressed in English is false in terms though correct in idea, and has been greatly increased by, and is chiefly due to, the conventional application, or rather misapplication, of the word *manufacture*, to those establishments where the hand of man is almost superseded by metallic mechanism and his energy by steam. The fabrication of fictile ware may still perhaps be said to more truly realize the original idea of *manufacture* than any other to which the term is applied; and, curiously enough, the more so in those productions which deserve the name of works of *art*. It is still the clay moulded by the potter's *hand* which can truly claim the title, and whatever subsidiary aid may be afforded by set moulds and mechanical contrivances, fictile fabrics still derive their highest value in that they are formed by some master hand, impressing on the clay the conception of some master mind, whose imagination is thus developed in beauty of form, of colour, or of both. It is thus that pottery claims kin at once with the arts of the sculptor and the painter, as may be illustrated by the productions of Wedgwood from the designs of Flaxman, and those of the short-lived factory at Bow, for which Nollekens and Bacon designed and painted.

The term pottery applied both to the art and the produce of the manufacture of earthenware, first in its general signification, and next as distinguishing opaque from translucent ware, has now so generally obtained in the English language that it may seem pedantic to observe on it as a modernism. Moreover, even if it were not formed, most legitimately as we presume, from the French *poterie*, art and science seem to have established a claim to a language of their own, free from the trammels of philologists; and, to the horror of strict grammarians, combinations are continually perpetrated the most irregular, and most excruciating words are invented to supply a vocabulary sufficiently varied and distinctive for the requirements of advancing science. A striking, amusing, and a most successful example of this audacity, was exhibited a few years ago in the lengthy and almost heated controversy of telegram *versus* telegrapheme, in which correctness had to succumb to convenience. It may be, however, worthy of remark, that though the words pot and potter are old enough in our language, the word pottery does not appear to have been in acknowledged use in Dr. Johnson's time; and it would, we doubt not, have been disowned at the academy for young ladies at Chiswick Mall, for it does not appear in the "Dixonary" of "the great Lexicographer"—at least it is not to be found in the 9th edition, quarto, 1806, which may be fairly presumed to be about the date when "the Semiramis of Hammersmith" and her establishment flourished together in "Vanity Fair." This is the more remarkable as the fancy for china was fully rife in the time of Johnson, who himself took a considerable personal interest in the manufactory which was then established at Chelsea; and there has never perhaps been a more enthusiastic collector than his contemporary, Horace Walpole. Dr. Johnson remarked on Walpole's writings, that "he had got together a great many curious little things and told them in an elegant manner." With the slightest verbal alteration the same might have been said with equal truth of his collection of articles of *virtù*. Strawberry Hill has stamped on all articles which belonged to it a mark of honour, a dignity and a value appreciated by purchasers as well as sellers of *brie-a-brac*. We may add that this famous collection contained many specimens of what is now called pottery, as distinguished from porcelain, but which then came under the common term of delft.

As regards the word porcelain, it can claim a far higher antiquity among the immigrant families of the English tongue, and though scarcely dating back so far as the Conquest, and evidently of foreign descent, had acquired an established position long before the time of Johnson. He admits it into his Lexicon, but gives the fanciful derivation "*pour cent années*," which was but a continuation of a vulgar error that it was made of marine and egg shells, and buried for a hundred years. The original meaning and the derivation of the word is still a matter of some doubt, the consideration of which will call for our notice in its proper order.

In remarking above, that Mr. Chaffers's book contains more than might be expected from its title, an exception was made in respect to the introductory essay. "The Vasa Fictilia of England" appears to us a rather grandiose heading for the somewhat fragmentary paper to which it is prefixed. Nor is it clear why, under so extensive a Latin term, modern earthenware should not be included as well as mediæval. Some protest, too, might fairly be made against the application of a Latin word at all to any but Romano-British pottery; for if the term is to be extended further, it surely would be better to put it into a plain English translation, or at least substitute an English equivalent; just as the Italian writer on the ancient pottery of Arezzo, Dr. Fabroni, who is more than once referred to, has entitled his work in his own language, "Storia degli Antichi Vasi Fittili Aretini." The adoption of Latin words, when unnecessary, appears to be spurious classicism. There are indeed cases in which, for terms connected with the arts,

there are no English equivalents, and we need not be ashamed to have recourse to words invented or applied by foreign masters or philosophers; such, for instance, as "Sonata," and "Chiaroscuro," and "motives," in music and painting. But it is difficult to see the necessity, when writing in English, for calling even a Romano-British tile, vase, lamp, or cup, much less a mediæval jug, pot, or pitcher—a vas, or vasum fictile. Not that the fault is in our author; for he has but adopted what is probably the cant of the curiosity-shop, and possibly of the museum; but the habit is one which is but too much in vogue, and it would be well could it be checked. On the other hand, the necessity and convenience of conventional terms must be admitted, and a dead language frequently affords the best materials for their construction. Nor should we be too strict in criticising them, though it would be well if care rather than chance selected them. Possibly it would be said that, in the present case, it was wished to have some generic term, under which all earthen vessels of past ages, the possession whereof is the result of excavation and research, may be classified; and that the correct Latin term is as good as any other; and that, as it is fitly applicable to *Roman* remains, it is by a fair analogy extended to mediæval relics discovered in a similar position. The question is not perhaps worth discussion, and for practical purposes is in the present case useless; but we hope we may be excused for having been led by it into thus alluding to a tendency which often leads to less justifiable results.

The author has evidently too much eye and feeling for beauty and art to dwell with much sympathy on the ancient British pottery, and dismisses it in the following short but comprehensive passage:—

"The earliest specimens of British pottery found in England are principally funereal, discovered at the burial-places of the ancient Britons, under mounds of earth called barrows, or heaps of stones called cairns. These are the most primitive kinds of sepulchral interment. The barrows are mostly seen on elevated situations, either on downs or on uncultivated spots; and the investigation, although interesting, yields in general little to repay the antiquary for his trouble; as they seldom contain more than the rude sun-dried urn filled with the ashes of the dead mixed with the charcoal of the funeral pile, cremation being universal at that early period. These urns are sometimes ornamented with chevrous, semicircles, and longitudinal lines, cut or scratched on the vessel. We shall not enter into any lengthened description of these early British vessels, but proceed to give the reader an account of the more artistic productions of the Roman settlers in Britain, who brought with them improved methods of making and decorating pottery, as well as other manufactures."

The ground is thus cleared for the essay on the "Vasa Fictilia of England," which is divided into two parts: 1. on Romano-British Pottery; 2. on Mediæval Earthenware. It is written in a simple, unaffected style; and the well-executed illustrations add to the pleasure and instruction to be derived from its perusal. We hope to continue our remarks in a future number.

MUSIC AT HOME.

SPEAKING "by the card," Mr. Gye may be pronounced the victor in the *Nozze di Figaro* contest of a few weeks since; for he produced the opera in his regular season, though as late as July 27th, the last night but one thereof. The "Orpheus of the Haymarket" was before him by three days, it is true; but the "cheap night" period had set in, and *La Nozze* was a pearl thrown before audiences allowed to retain the habilimeuts of every-day life while doing homago to Mozart. Dignified and conservative Covent Garden may point the white finger of scorn at the vulgar giant of the Pall Mall district, but much comfort is gained by the temporary abolition of swallow-tailed garments, tight boots, tape neckties, and similar emblems of civilization. In a general sense, this gem among operas was satisfactorily giveu at both houses, and the balance of advantages was tolerably equal.

The public gain by the very creditable rivalries among operatic artists; and uo doubt considerable emulation existed betweeu those who played the corresponding characters at each theatre. It may be quite as safely assumed that all of them felt they were engaged upon a master-piece of musical genius, and an opera which may serve as a model for all ages. Though musical amateurs had but little time to make comparisons, they possibly discovered in Mdlle. Titiens's Countess an intensity of feeling and expression, and in Mdlle. Artôt's a more dreamy and tender pensiveness. It may likewise have appeared that, although Mdlle. Sinico, as Susanna, is a much better actress than Madame Lemmens-Sherrington, our English soprano carries off the palm as a vocalist of extraordinary refinement. Mr. Santley's Count Almaviva is preferable in every respect to that of his rival Siguor Graziani, for the first-mentioned baritone, in tho jealous passages with the Countess, is energetic aud at the same time gentlemanly in manner. M. Faure's Figaro is formal and constrained, whereas M. Gassier's is wonderfully buoyant and genial. As for the Marcellinas, an enraged musician might well exclaim with Mercutio "A plague o' both your houses!" and notwithstanding Madame Trebelli-Bettini's iucomparable voice and singing, Mdlle. Pauline Lucca is certainly nearer the ideal of that saucy little spoiled darling Cherubino. At the Royal Italian Opera Mozart's intentions are respected, but at Her Majesty's the enthusiastic Signor Arditi may be called to account for certain *brazen* interpolations in the March.

A concert of far more than average interest was given by M. Moschcles, at St. James's Hall, on the 30th of July. The veteran pianist, be it remembered, did a great deal, some years ago, to foster pure taste, and led students into the right path. He was a great executant in his time, and gave to the world piauoforte music that would shame many week inventions of the enemy nowadays. Yet how often is the name of Moscheles heard of in drawing-rooms? Only a few mouths since, Madame Arabella Goddard resuscitated his "Recollections of Ireland," and shortly afterwards Moscheles himself received an ovation at Mr. Arthur Sullivan's concert, whither he had betaken himself as one of the public. He played at the eoncert of the 30th (for a charitable object) some of his admirable studies, and extemporized on themes from Beethoven's C Minor Symphony, and "See the conquering hero comes." Extemporaneous performance was always a speciality with M. Moscheles, but the spirit of musical creation is sometimes not conveniently at hand. True spontaneity is not invariably at command, and much technical ingenuity hardly compensates for its absence. Parrots will not talk save when

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in the humour, and the clever treatment of specified subjects, although interesting in its way, is apt to produce only fugitive impressions.

On the 18th of July a painful exhibition was made of an untaught negro pianist at the Hanover Square Rooms—those genteel apartments to which the third King George gave a plate-glass mirror. Since that horrible insult to the majesty of death (the embalmed body of Julia Pastrana) was shown there for a shilling, the people of colour contemplated by admiring London have been principally of the mild Christy Minstrel order. "Blind Tom" has, however, stimulated the Ethiopian interest; and is supposed to be mad upon every subject excepting music. He can name any note immediately after hearing it played; can sing any given note without that assistance, can give an imitation of anything he hears on the pianoforte, and can sing one of Henry Russell's songs. The first exploit is not very remarkable, the second is so; the third is to a great extent a failure, and the fourth a simple fact. This African is pronounced to be of the lowest type; and, we apprehend, he may fairly claim to be of the ugliest. Granting that his musical capacity is unusually extensive, and crediting the assertion as to his being entirely "untaught," a black youth standing on a platform and making the most horrible grimaces is not a pleasant sight. The negro visage, when twisted and contorted by the mowings of an idiot, becomes repulsive in the highest degree. In England we keep imbecility out of sight, and do not turn a penny by making a sensational exhibition of mental vacuity. In a sense of true musical feeling, Blind Tom's performance is beneath contempt. He plays crack-brained fantasias of his own, and uses a piano with as much delicacy as a blacksmith does his anvil, or a thresher the corn beneath his flail. Blind Tom, we are told, would be quite as much delighted to hear himself hissed as applauded. It is a pity the experiment is not tried, and that, with the enforced discontinuance of this lamentable spectacle, the character of the English public for reason cannot be, at least partially, vindicated.

The Societies have, for the time being, had their day, or, properly speaking, their nights. The Schubert brethren have rested from their labours; but, being wise in its generation, the Schubert Society does not explain its mission. The public, left to speculate on the subject, naturally bethink themselves of Franz—his genius and his exquisite songs; and foolishly conclude that all three are to be honoured and reverenced by the Schubert Society. Unfortunately for Franz, who was and will be always great, there is an E. Schubert, who, musically speaking, and arguing from his compositions played at the concert of July 25th, is not, and never will be, even mediocre. That Franz Schubert should have no place in the programme was bad enough; but that the great man should be ousted by a very small violoncello player of the same surname, was a piece of impertinence absolutely sublime. At the Dramatic College Concert, on the 20th of July, the public were treated to a scandalous scene. Probably for the first time in the history of the Hanover Square Rooms, a lady vocalist came on to sing, and waited on the platform while a squabble was progressing outside. The scene ended by one of the conductors telling the audience that the artists were disgusted with the whole thing. Everything was done out of order, and not one Shakesperian song was given, though the concert was intended to further the interests of the stage.

Mr. Alfred Mellon began his new reign on the 7th of August. Promenaders have found but little inconvenience as yet. Mr. Mellon's scheme for the present season extends to three months of the concerts, and an operetta and pantomime at Christmas. Master Bonnay, xylophonist in ordinary to everybody of consequence, has made a very palpable hit. The xylophone is not new; clowns have, before now, extracted from pieces of wood just enough of something to call a tone. Master Bonnay does more, and plays with extraordinary precision.

ARTICLES DE PARIS.

THERE is always something new in Paris. Many have said this, some scornfully, some complainingly, but certainly the greater number admiringly; and as it is in the spirit of admiration that the prettiest lips have spoken, it is the banner of this faction that waves the highest and whose triumph is the most secure. Novelty is a queen whose sway extends far and wide, and who, with her faithful and zealous servitors, taste, creative fancy, and nimble-fingered ingenuity, has chosen Paris, of all the cities which her presence graces, for her favourite residence. Her creations here are not perhaps always quite correct according to strict views of art. Severe taste might sometimes note shortcomings and exaggerations; conventionality finds in them many wild fancies overleaping her boundaries, laughing fearlessly in her face, and trying to blind her eyes with their *éclat* as with golden dust: but the productions are generally pretty, even if extravagant, and often most graceful and charming. Perhaps the adjective best fitted to them is the well-worn word *coquet;* some ladies, still greater advocates for novelty, go farther, and adopt the horrid word *chic;* but, *prenez garde, mesdames*, you have borrowed that direct from *argot*, which is not an elegant creditor in a lady's boudoir. It must be admitted that the lower qualities are most common in the crowd of novelties in dress and *parure;* but in what is this not the case? Hard, indeed, is the struggle to get free from their domination: but Paris has its share in the higher grades of taste, often raising fancy into art, and producing that which is so charming to the cultivated eye, harmony and grace in adornment.

You do not, however, require or expect from me an essay on taste, but simply a short notice of that which is novel and pretty. As I have said above, there is always something new to be seen in Paris by those who have eyes—and use them for observation.

Who has not dwelt with delight on the humming-birds, those wondrous little foreigners, so magnificent—indeed, almost incomparable—in colour? The poet has called them the "winged jewels of the air," and never did poetic fancy adorn its object more truthfully. Their exquisite plumage has graced many a pretty head, and been imitated on many a delicate trinket and elegant fan; but I was surprised, the other day, to see some charming specimens set, as jewels should be, in shining gold. I saw a tiara, a comb, brooches, a ring even, exceedingly rich and bright, and deriving their principal charm from the metallic plumage of these birds. I send you a sketch of the centre of the tiara, which had five humming-birds' heads on its semicircle. Each lovely little head, as you see, is set up on its golden shield just as the head and antlers of the noble stag are mounted in baronial halls; the slender bill is bordered by a fine fillet of gold, and the little eyes are replaced by diamonds, rubies, or emeralds, set in tiny rings of gold. Between the shields are oval medallions, filled with the smallest feathers of the humming-bird, in fan-like arrangement. The whole forms a wonderfully-brilliant ornament; and I should like to see it flashing its bright colours over some fair brow. The comb-top was only a smaller kind of tiara, with three birds' heads set on the gold rim. The brooches had, of course, but one head each, and I can fancy them charming, fastening at the neck some white material. The ring, which occupies the centre of my sketch, is a true Parisian fantasy: the idea of a "winged jewel" on the finger is certainly pretty enough, though not very convenient, and would tempt, I think, only the most devoted lovers of oddity to be its wearer. But, in this case, the bird is a jeweller's bird,

a manufacture in all but the feathers of which it is ingeniously formed—a little glittering cheat, spreading its artificially-made wings over the golden circlet. Humming-bird jewellery may not become common, but it is new, and that fits it exactly for my pen.

For some time chains and medals have been the rage—curls have been imprisoned, white throats encircled, bonnets laden, and dresses ornamented with these emblems of thraldom; they have been twisted in the hair, to fall in loops on the neck; and, as with the savage princesses of the Oceanic islands, suspended to the ears in guise of ear-rings. The gilt sequins have become old; we are all tired of their Oriental charms. Eastern Jew dealers have worn the style threadbare, and fashion has consigned them to oblivion. Paris has started its own medal style, and, with chains, it is becoming quite the *mode*. I have seen a number of *ombrelles* (*parasols* we call them now, *à l'Anglaise*) with a medal on each segment, and chains connecting the tip of each rib with the next, and, in some cases, festooned on the silk. I have seen black silk *parasols* with chains and medals in frosted silver, and blue *parasols* with oxidized ornaments. Sometimes, too, small stuffed birds and bright-winged butterflies are placed hovering on the sun-shades; but to my eye they look awkward, though, of course, it may be said, in defence of the fancy, that birds and butterflies might pause in their flight, and poise on the passing silken canopy. I confess I had rather not have my parasol laden with medals and chains, however pretty; but some people are so fond of novelty that the incongruity does not strike them, and things really pretty in themselves earn their admiration and gain their support without their troubling themselves much about the convenience; and then the *clinquant*, some gentlemen say, is itself dear enough to the female senses—an assertion which we must, of course, repel as an impertinence.

If medals and chains are out of place on a parasol, they are pretty enough elsewhere, and I send you sketches, which I was compelled to reduce to one half the real size to get them on to my paper, of two neck ribbons which are extremely pretty. They are of black, or purple watered silk, with gold ornaments, or of blue, with oxidized silver. Where the medallions are really good, these neck ribbons are very tasteful. The mixture of metal with the silk in the tassels is effective and artistic, carrying the idea throughout.

At the foot of my sketch is another *article de Paris*, a gilt comb, also with chains effectively disposed, and, suspended from the comb top, are drops of the brilliant German crystal, as it is called, but which, I rather suspect, owes its beauty, and its cracklin appearance in the interior, to human ingenuity. In the present case the drops are green, but I have seen them of different colours, and sometimes of clear crystal.

Can I leave unheeded the inexhaustible subject of bonnets? Its elevated position seems to assert its right and demand a gracious word. The fashions of ladies' bonnets vary a hundred times in a quarter of a century, and the last is always the most charming. What endless fancy Paris has lavished to produce the marvellous transformations of gauze and ribbons, lace, straw, and flowers of the present day, those fairy-like fabrics, mere charming pretexts to pose on the hair! I was beginning to imagine that her resources must be nearly exhausted, but she is proving their richness more than ever.

One of the last creations of Parisian coquetry is the *fanchon espagnol*, most pretty but most fanciful. It is composed of a broad piece of black lace fastened by two flowers; one nestling in the hair, and the other placed on the *brides*, where they cross beneath the chin. I am not at all sure about the taste of the inspiration which produced the *pouff de fleur*, but its novelty at least merits a description. A large rose on the summit of the head forms the bonnet; the gauze *brides* which secure it are fastened under the chin by a small rose, and the whole is sprinkled with glass "tears" imitating drops of dew. I have not yet seen it on a pretty head, where, perhaps, this new rose-bonnet might win my admiration in spite of me.

Paris is getting out of town as fast as possible, flying from the hot, dusty grandeur of the *boulevards* to breathe the fresh, pure air of the country, before seeking the still fresher breezes of the *Bains de Mer*. It is horrible to have to acknowledge being here still; but, as I am, I send you what I trust will not be unacceptable.

K. E. F.

TAINE'S TRAVELS IN ITALY.*

So much has been written about Italy, that to look for anything new upon this subject seems somewhat Utopian. Yet novelty may arise, not from the country itself and its invaluable treasures, but from the mind and ideas of the writer. In fact, almost every person who visits Italy returns with different opinions about everything there, so that human organs may be said to possess perceptions as varied as the expression of individual features and physiognomy. Now, M. Taine has explored no unknown corner of Rome or Naples; he has made no archæological discovery; he has elucidated no pendent question about doubtful pictures or uncertain authorship; he has, in fact, gone through the ordinary routine of travellers in Italy, and yet his book is a most interesting one, merely from the original point of view in which the writer has placed himself throughout his artistic rambles.

M. H. Taine belongs to that young and somewhat boisterous school, of which M. Edmond About also is a member. After passing some years at the *école normale*—a nursery not only of able professors, but of lively and clever journalists—the former entered literary life with critical articles in the *Journal des Débats*. When literature left his pen unoccupied, the young professor, *in partibus*, made excursions in the dominions of art, and attracted attention by his bold expression of daring (or at least so considered) views on men and things about which so many people, especially in France, think there can be only one reasonable point of view.

M. Taine's deliberate and independent disposition made him at once a decided favourite with the younger portion of his contemporaries, and no lecture-room is so full, no lesson better attended, than Taine's course of Æsthetics and the History of Art at the *Ecole des Beaux Arts* in Paris. It was that notorious sympathy, together with his undoubted talent, that secured for the young professor a position which he, with his political ideas, would not have postulated any more than the

* *Voyage en Italie.* By M. Taine. Vol. I. Naples and Rome. Paris, 1866.

French government would have offered it to him under ordinary circumstances.

To return to the *Voyage en Italie*, and show through the dimness of translation, what new light M. Taine can throw on hackneyed subjects, we quote this paragraph about Rome :—

"Rome may be compared to a painter's studio; not to that of a fashionable artist who, like some of my countrymen, dreams of fame and makes a parade of his profession, but the studio of an old broken-down painter, whose genius has long since deserted him, and left him to quarrel with tradesmen. He has been a bankrupt, and creditors have more than once seized his furniture, respecting nothing but a few works of art and the four walls. To-day he lives on the ruins of the past, acts as cicerone to the curious, takes money from the rich, whom he despises even while he pockets their fees. His fare is meagre, but he consoles himself with the memory of the glorious exhibition in which he has figured, vowing to himself, and sometimes to others, that next year he will take his revenge. It is not to be denied that the studio has a nauseous smell about it; the floor has not been swept for an age; the sofa is burnt here and there with the ashes of his pipe; some old shoes worn down at heel are littered in a corner; and still the sideboard, on which lie a bit of sausage and a rind of cheese, is a real old piece of Renaissance furniture, and the threadbare tapestry, which only half conceals a wretched mattress, is a fine work of the sixteenth century; on the wall, along which runs the ugly stone chimney, hang rare bits of armour, and some arquebuses of beautiful workmanship. It is a place to see, but not to live in."

After giving his general impression on the town at large, M. Taine proceeds to visit the public galleries and the chief works of great artists. The author has some interesting remarks on Raphael for instance :—

"His (Raphael's) triumph is in ideal and allegorical personages. . . . . Like the ancient artists, he suppresses the fugitive and accidental expression of the human figure, as well as all the peculiarities betraying a being tossed about and crushed by the battles and perils of life. His personages are exempted from the laws of nature; they have never suffered, nor can they be moved; their calm attitudes resemble those of statues. One would not dare to address them; one is impressed with respect, and yet this respect is mixed up with sympathy, for you soon discover under their gravity an almost feminine kindliness and sensitiveness. . . . .

"Of all the artists I know, none is more like him than Spencer. Many readers, at first, think Spencer formal and dull; nothing seems real; but soon one mounts with him into the light, and his characters, which are impossible, are divine."

Among a profusion of remarks and criticisms which would be worthy of notice, we choose the following :—

"There are four men who, in art and literature, have raised themselves above all others, so much so that they seem to belong to a separate race. These men are Dante, Shakspeare, Beethoven, and Michael-Angelo. Neither their deep knowledge, nor their complete possession of every resource of art, nor their fertility of imagination, nor their originality of mind, could alone have given them that place; they possess all these gifts, but this is of secondary importance. What has carried them to such a height is their soul, a soul of fallen divinities, altogether raised by an irresistible effort towards a world out of proportion with ours, always fighting and suffering, always working and struggling, as incapable of being satiated, as of being discouraged, and ever employed in bringing forward before mankind giants as powerful and ungovernable, as painfully sublime, as the minds from which they sprang."

The first volume only of M. Taine's work on Italy is yet published. It is chiefly devoted to Naples and Rome. In Naples he studies the climate and landscape, the neighbourhood, Herculaneum and Pompeii, the art-galleries, and even the habits and disposition of the people. Naturally, Rome is the principal theme of the book. M. Taine does not supply anything like a *guide*, but takes a general survey of the great men and things from which the town derives its well deserved fame.

What this short analysis is completely inadequate to show, is M. Taine's marvellous power and variety of expression. His ability in using the most exquisite and refined resources of language is perfectly charming. He draws more than he describes, and the details that he adds are mere touches of colour. Others may exhibit more feeling and depth, but in the vivid comprehension of the picturesque, we know no writer of the present day in France, and few of any country or period, who can be compared with him.

DESTRUCTIVE INSECTS.

IN the autumn of last year the *Société centrale d'Agriculture* of France got up an admirable exhibition of useful, and destructive insects in Paris. The success of the exhibition has induced the society to form an International Society of Insectology, which promises to do some service to science as well as to agriculture and gardening. The object of the new society is to study and publish the history and habits of each class of destructive insects that prey upon the crops and devour forest, orchards, and gardens, and to give precise instructions relative to the proper season and means for their destruction.

The ravages of insects have been terrible in France for some time, and the losses caused by them have reached a very serious total. In the central departments of France the ravages of the caterpillars have been enormous; in the vicinity of Paris the cockchafers and caterpillars have devastated the plantations; in Normandy the white worm has eaten up the green crops; to the north of Paris a small black worm attacks the beetroot, and in Burgundy a coleopterous insect, called the *neriter* or the *gribouri*, endangers the great crops. The dryness of the seasons and the mildness of the winters are regarded as the chief causes of these invasions of insects.

The destruction of these mischievous creatures is not so easy a matter as some persons may suppose; it requires considerable entomological knowledge to know when the various changes take place in insect life, and which is the best season for attacking their haunts; in fact, the general knowledge of the entomologist added to that of the special locality. The precise habits and transformations of each destructive insect require to be studied, and only then can effective means be taken to get rid of them.

M. Guérin Méneville has selected for example the *Dacus oleæ*, which devastates the olive plantations, and has described its habits. The eggs are deposited in the olive at the moment of its formation, and lie there during the process of incubation. When the Parenchyma of the fruit is sufficiently developed to afford nourishment, the larvæ

appear, and immediately commence devouring the walls of their prison; and they continue to do so until the olives are ripe. By this time the whole of the pulp of the fruit has disappeared, and nothing remains for the mill but a worm-eaten olive, that yields but a few drops of bad oil. But the worm does not go to the mill with the olive. About the time for gathering the fruit, the insect comes out of his retreat, and lets himself drop on the ground, into which he burrows to a certain depth, and passes the winter in a state of complete torpor. When the warmth of spring begins to be felt, he revives, and quits the ground in the form of a fly, and this fly deposits her eggs in the young olive-buds. The plan of destruction proposed by M. Guérin Méneville, when the insects are numerous, is to gather the olives in October, when the larvæ are but partially developed, and have only eaten a portion of the flesh of the fruit, and extract the oil at once. The yield may be small, perhaps, and the oil not very good; but it will be worth something, and the insects are utterly destroyed for the following year.

When the habits of each species of insects have thus been studied, and the inhabitants of a given district can be made to understand the importance of combined action, the means of destruction will rarely be very difficult to arrange. Every country wants its National Society of Inscetology.

The apple, pear, plum, and other fruit-trees, have also suffered terribly by insects whose habits resemble those of the *Dacus oleæ* above mentioned; and a useful receipt has been given for combating their destructiveness. It has been discovered that these insects have an intense horror of the smell of vinegar, and it is therefore recommended to sprinkle the trees well, by means of a syringe provided with a fine rose, with a mixture composed of one quart of vinegar to nine quarts of water, the solution being previously well stirred, so as to mix the two liquids. This plan is recommended by the Imperial Society of Horticulture of the Rhone, and it was tested last year by the Director of the School of Arboriculture at Lyons, M. Denis, who says that the trees so treated were covered with fruit, while others were almost completely stripped by the insects.

The following method against ants and other insects which climb up the stems of trees is highly spoken off. Take common lamp-oil and expose it to the air for three or four days, till it becomes gluey, then take a painter's brush and make a ring around the bole of the tree about two feet above the ground; the band need not be more than two inches wide, and it is said that it will protect the tree for four years at least. The operation must be repeated on three or four successive days.

But all the resources of science and all the efforts of man seem helpless against such a terrible plague as that of the locusts, which has devastated a large portion of Algeria for nearly three months. These creatures arrived in swarms that actually obscured the light of the sun, and lay on the ground over hundreds of square miles many inches deep; the army and the whole population turned out against them; on the sea-board the soldiers chased myriads of them into the sea, but inland it was found utterly impossible to produce any effect upon them; they not only devoured the crops, but they choked up the rivulets and all small channels, and it was with the greatest difficulty that the soldiers could prevent the water from becoming putrid. In the presence of such a terrible visitation as this, man is almost helpless, and is forced to give way before countless legions even of insects. The mischief done is enormous, and a subscription, headed by a sum of 20,000 francs from the Emperor, has been set on foot in Paris to furnish the starving colonists with the necessaries of life. There is one slight, very slight, compensation in this case; namely, that the Arabs eat the locusts and declare them to be excellent; one mode of preparing them is to fry them and preserve them in oil.

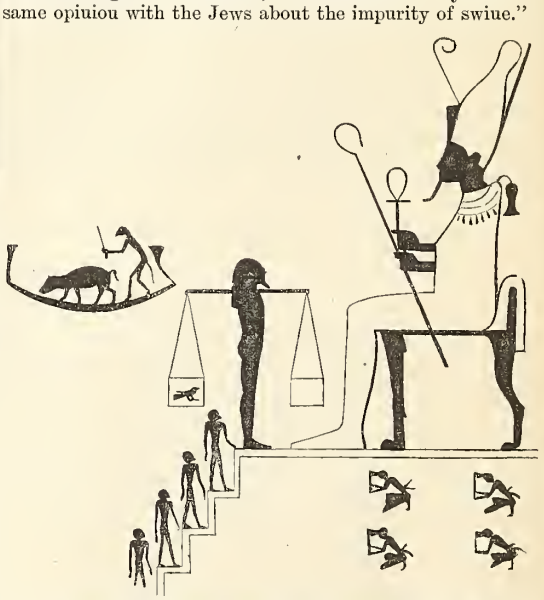
REVIEW.

Texts from the Holy Bible. Expressed by the Help of the Ancient Monuments. With a few Plans and Views. By Samuel Sharpe. (Day & Son, Limited.)

Mr. Sharpe has, in the volume before us, rendered most valuable aid in interpreting many passages in Holy Scripture, and no one who has perused it will fail to see at once its importance and worth. In fact, as a work of reference on matters connected with sacred writings, it is invaluable. Nothing can be more strangely interesting than to trace from figures hewn on the solid rock, carved on the towering monolith, or engraved in intricate and delicate tracery on the soft alabaster or dense Syenite of some ancient sarcophagus, the close relationship which existed between the mythic and figurative belief of the ancient inhabitants of Egypt, Assyria, and other localities equally antique, and that of the early Jewish people, who followed them on the pages of the world's history. Much that seems vague, unsatisfactory, and of obscure meaning, is clearly interpreted by the hieroglyphic writings.

We read, says Mr. Sharpe, in the fifth chapter of St. Mark, thirteenth verse, as follows:—"And the unclean spirits went out and entered into swine."

In the annexed cut (an extract from the above work), taken from a drawing of the sarcophagus of Oimenepthah, we have the Egyptian god Osiris seated as judge of the dead. The human race are coming up the steps of his throne to be judged. "Before him is placed the great pair of scales. In one scale is the soul of the dead man in the form of a bird, as in p. 3, but the sculptor has omitted from the other scale the figure of Truth, against which the soul is usually weighed. At a distance in a boat, is the soul of a wicked man sent into the body of a pig, and given into the charge of an ape. On a papyrus in the British Museum, we see the soul of a good man sent into the body of a ram. These pictures explain the Egyptian opinion of the transmigration of souls; and show that they held the same opinion with the Jews about the impurity of swine."



It is remarkable that many of the religious traditions and customs of the Hindoos should so closely resemble those of the ancient Egyptians. Maha Deo, or Siva, together with his consort Parvati, are deities in high repute throughout Western India. He has been compared to Osiris, to Saturn, and Jupiter. He is said to delight in human sacrifices; represents Time, and as with Osiris the ox, apes are sacred

to him. It has been said that on the Bombay sepoys, who formed a part of the expedition against the French in Egypt, being landed, they manifested great delight and astonishment at finding their own sacred Bull, "Nundi," as well as many other mythological figures which they well knew, and immediately recognized, exclaiming that the people who formerly inhabited Egypt must have been Hindoos. It is, however, far more probable that the Hindoos are indebted for many of their mythological ideas to the land of Osiris.

However this may be, no doubt can exist as to the deep interest appertaining to all connected with Egyptian lore. The numerous illustrations which embellish Mr. Sharpe's work, have been chiefly furnished by Mr. Joseph Bonomi, whose zeal in the cause of antiquarian research and graphic pencil are too well known to need remark.

There is but one cause for regret, and that is the brevity of the work. Still it is to be hoped that other editions will follow, and that more of the same class of subject matter may be placed ere long at the disposal of the student of antiquity, and general reader.

A HARD GEOLOGICAL NUT.

IN the pleasant little village of Welwyn—just opposite to the church, and between it and a sluggish little stream which rejoices in the euphonious title of *Mimram* and abounds in excellent trout, many of them of upwards of 5 or 6 lb. in weight and of that exquisite pink hue so beautiful to the eye of both sportsman and epicure—there stands an old-fashioned house, most unpretending and ugly in its appearance from the road; but on the river-side possessing attractions rarely to be met with in such immediate proximity to a village.

This house has been in our occupation for the last two years, and up to within a few weeks of the present time. We should not presume to draw the attention of the readers of NATURE AND ART to the spot, were it not that there are associations connecting it with other days, which we think may invest it with interest to many; and that within its precincts was lately found an object of some considerable curiosity, which it will be the purpose of the present paper to describe.

The house, as we have already stated, is an old-fashioned structure of no architectural pretensions whatever, and, in fact, of as ugly an exterior as can well be conceived; but from within its walls have, at different periods, issued forth thoughts and learning, such as must render it ever memorable to the poetic and literary world. At the present date the estate belongs to the representatives of the late Mr. Henry Fynes Clinton, who lived in the house up to the day of his death; who, standing at his high desk in a room overlooking the garden, there compiled that magnificent work, so prized by the classical scholar, "*Fasti Hellenici;*" and whose character, we have reason to believe, was prominent in the mind's eye of his dear friend and neighbour, Lord Lytton, when writing that delightful and most popular of his charming novels, "The Caxtons."

In the old title-deeds the place is called "Guessens," probably a corruption of the German "Gast-haus."

In former times the old house was the abode of the poet Young; and here he is supposed to have written his melancholy "Night Thoughts," whilst sitting in his room looking into the churchyard. In the garden there is an avenue of beautiful horse chestnut trees reaching from the house to the river, where Young, in his contemplative moods, would walk, and under whose branches old Johnson is said to have sipped his tea and smoked his pipe, accompanied by his biographer and toady Boswell, who introduced him to Young. There are also many stories told of the poet in his *gallant* moods making flowery speeches to ladies under the shadow of these ancient trees. It is further declared (though we hope, for the sake of our poet's character for good taste, that there is not sufficient foundation for the report), that Young had a *scene painted*, which he placed at the end of the avenue to give an *idea of distance*, when looking through it from the house. These trees are in themselves really noteworthy. The avenue is a short one, having only six trees on each side, but they are truly beautiful. Their branches feathering to the ground, have thrown off shoots, which in turn have taken root and produced a growth suggesting that of the famous banyan tree;* and in the spring time, when covered with blossom, the group presents a "giant's nosegay," which it would be difficult to find words to describe.

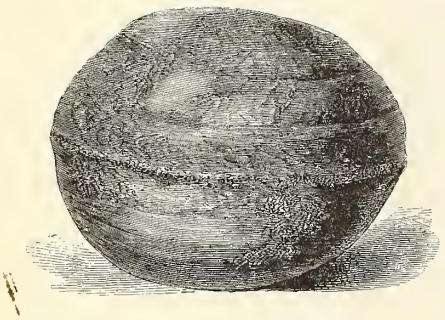
In the garden also, and lining the banks of the river on the opposite side, are some magnificent willows, which old Jesse, in his "Gleanings," has thought well worthy of note. The chestnuts must, indeed, be very old, for they were flourishing in Young's time, when he planted a now perfect avenue of limes in the rectory garden. But relics with far longer pedigrees have here been found. A battle is said to have been fought in the neighbourhood with the Danes; and Roman pottery, and bones, perhaps Roman also, have been dug up in the garden.

But older far than all is the curiosity we are about to describe; and it came to light in this wise. Our three little girls, Agnes, Edith, and Cicely (aged respectively six, five, and three years), had, in their play, established under the chestnuts what they called their gold and silver mines. The thick shade of the trees prevents the growth of grass under them; but the ground is carpeted with aconites, crocuses, moss, and periwinkles, which in the spring have a most brilliant effect. A few months ago some flower-beds had been excavated hard by, and the old material (composed of remains of buildings, mixed with the original gravel which here overlies the chalk) had been spread out under

* The growth (as described in the text) of the chestnut is, we believe, somewhat remarkable; the branches having touched the ground—have taken root, and the new stems are considerably larger in girth than the original branches from the tree itself.

the trees. One fine hot day in July, on our return from London, we were assailed by all the little ones at once, and with the native fervour of true soldier's daughters (they were all born in a gun-shed at Woolwich), "Oh! father," they all cried together; "mother says there was a great battle here; and, look! in our gold-mine we found this *cannon-ball*."

They then put into our hands a round object with an iron-like appearance, but regularly flattened at the poles like the earth's figure, and with slightly raised concentric rings round it. Its size was about that of an ordinary grape-shot. It was comparatively light, and, from its structure, it was evident that this was none of *man's work*. We at once said, "No, children, it is far more curious than a cannon-ball. We will take it to London, and put it into the magazine; and you—like 'Old Benbow,' in your pretty dog-story book, 'Awake or Dreaming,'—shall *read* about *yourselves*." Hereat, as may be readily supposed, there was much delight and "clapping of tiny hands."



By the gentle persuasion of the geologist's hammer and chisel, applied by an experienced hand, amidst an admiring crowd of lithographic printers, the ball was split in two, and presented a true hollow sphere (accurately delineated in our woodcuts), filled with sand in the finest possible state of division, and the envy of all the lithographers.

This nodule and sand we have submitted to the most experienced geologists of the day, and the results of their united deliberations we proceed to record, in their own manner, for the benefit of those who take a scientific interest in such matters.

The little rounded, nodular mass submitted to us for examination, is the most perfect of its kind we have ever seen; and our researches amongst the old world treasures of the British Museum have failed to bring its like to light. Concretionary masses, slightly and irregularly hollowed, we have found both in the Jura formation of Southern Russia, and amongst the limestone beds in the neighbourhood of Poona, in India. Zeolites and lime crystals, too, have we found locked up like imprisoned genii within their tiny cells. Upon proceeding to divide our *hard geologic nut* on a convenient ledge of stone (a couple of well directed blows doing it perfectly), a quantity of beautifully fine, yellow siliceous sand, which perfectly filled the even circular cavity in which it had so long rested, was disclosed. The annexed cuts, from photographs, are the true size of the nodule. Its weight, together with the sand, is slightly under three and a half ounces. The crust or shell is composed of siliceous sand, of coarser grain than that which it contained, associated with iron.

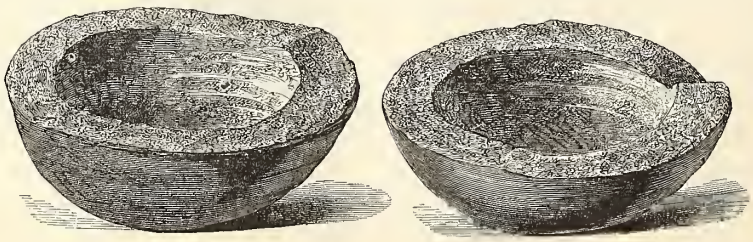
We do not think the neighbourhood in which the nodule was discovered likely to have been its place of original formation; but more incline to the belief that one of the many talented men who have, from time to time, occupied the old house, must have obtained it as being noteworthy and curious, perhaps, from some distant district—perchance even from abroad.

The process by which a formation such as this has been produced, we can only speculate on and say rather what we consider possible, than lay down any absolute train of causes as having operated in bringing about the particular arrangement of substances before us.

It is *possible* then that a siliceous pebble, worn smooth and rounded by the rushing snow-torrent and grinding avalanche of the glacial period, or, perhaps, from the beach of some sea of past geologic age, may have been deposited amongst the drifts of shifting sand. This, in time and in association with the iron element (water borne), may have surrounded our pebble, which, acting as a nucleus, became gradually encrusted, layer after layer, with that which was slowly but surely becoming stone, and building up a dungeon for it.

As periods and geologic ages pass away, and are lost in dim obscurity, other changes take place; upheavings and displacements occur; the sandstone rocks are in their turn ground, fretted, and worn down, becoming sand as before, and leaving little of the original mass but the hard crust surrounding a round cavity filled with fine siliceous sand, the result of the slow but unaccountable disintegration of our imprisoned pebble.

[We have, just before going to press, received fromNorfolk specimens closely allied to that under consideration, but not larger than pistol-balls. We shall furnish the result of our examination of them in our next.]



NATURE AND ART

October 1, 1866.]

CONCERNING INSECTS COMMONLY CALLED DEATH-WATCHES.

By the Rev. W. Houghton, M.A., F.L.S.

THE peculiar ticking sound that may be frequently heard proceeding from old furniture, picture frames, and the wainscoting of rooms, has attracted attention from very early times. It was, as is well known, popularly considered to be a death omen to some one of the family resident in the house wherein the sounds were heard; indeed, to this day, although superstition is gradually fleeing before the face of knowledge, there are many persons who are fully convinced that these tickings foretell death. The cause of them has been long ago shown to proceed from two or three species of beetles belonging to the family *Ptinidæ*, while some have traced them to a very minute insect—frequently seen in old books in the summer season—belonging to the Neuropterous order. It may not be uninteresting to consider the whole question, with a view to ascertain, as far as possible, the real facts as to the insects which produce the sound, their motives for making it, and the modes by which they occasion it.

The celebrated non-conformist divine, Richard Baxter, speaks as follows on the subject of the death-watch:—

"There are many things that ignorance causeth multitudes to take for prodigies. I have had many discreet friends that have been affrighted with the noise called a death-watch, whereas I have since, near three years ago, oft found by trial, that it is a noise made upon paper, by a little, nimble, running worm, just like a louse, but whiter and quicker; and it is most usually behind a paper pasted to a wall, especially to wainscot, and it is rarely if ever heard but in the heat of summer."

But yet Baxter could not altogether abandon the idea of omen, for he adds:—

"But who can deny it to be a prodigy, which is recorded by Melchior Adamus, of a great and good man, who had a clock-watch that had layen in a chest many years unused; and when he lay dying, at eleven o'clock of itself, in that chest, it struck eleven in the hearing of many?"

According to the last-named authority, the insect that produced the ticking sounds was not a beetle, but a "little, nimble, running worm, just like a louse." From this description it is quite easy to see that the animal intended by Baxter was the small insect belonging to the Neuropterous order, to which I have already alluded. The name of this insect is the *Atropos pulsatorius*, whose likeness to a *Pediculus*, or louse, is certainly very striking.

Let us now consult another authority, the learned and philosophic Sir Thomas Browne. He says:—

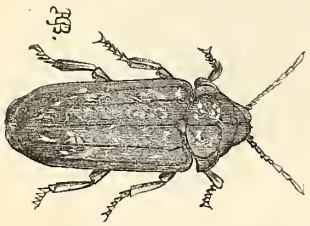
"Few ears have escaped the noise of the death-watch, that is, the little clicking sound heard often in many rooms somewhat resembling that of a watch; and this is conceived to be of an evil omen or prediction of some person's death; wherein, notwithstanding, there is nothing of rational presage or just cause of terror unto melancholy and meticulous* heads. For this noise is made by a little sheath-winged grey insect, found often in wainscot, benches, and woodwork in the summer. We have taken many thereof and kept them in thin boxes, wherein I have heard and seen them work and knock with a little proboscis or trunk against the side of the box, like a *picus martius*, or woodpecker, against a tree. It worketh best in warm weather, and for the most part giveth not over under nine or eleven strokes at a time. He that could extinguish the terrifying apprehensions hereof, might prevent the passions of the heart and many cold sweats in grandmothers and nurses, who, in the sickness of children, are so startled with these noises."

It is quite clear that an entirely different insect from the *Atropos pulsatorius* is here intended, and there can be no doubt that some species of *Anobium* is denoted, either, perhaps, *A. tesselatum*, or *A. striatum*.

Swammerdam speaks of a "small beetle, which having firmly and strongly fixed its foremost legs and bent and put its head through the space between them, makes a continued noise in old pieces of wood, walls, and ceilings, which is sometimes so loud that, upon hearing it, people have been persuaded that nocturnal hobgoblins, ghosts, or fairies wandered about them." "I think," continues Swammerdam, "that this may be properly called Sonicephalus, or the noisy-headed beetle." Here again there can be little doubt that some species of *Anobium* is signified. Let us also bear in mind the mode in which the insect produces the well-known ticking, according to the observation of so good an authority as old Swammerdam. Wallis,

* *i. e.*, Timid. The word is now obsolete.

in his "History of Northumberland," attributes the sounds in question to the *Anobium tesselatum*.



"The small scarab," he says, "called the death-watch (*Scarabæus galeatus pulsator*) is frequent among dust and in decayed rotten wood, lonely and retired. It is one of the smallest of the vagipennia, of a dark brown, with irregular light-brown spots, the belly plicated, and the wings under the cases pellucid; like other beetles the helmet turned up, as is supposed for hearing, the upper lip hard and shining. By its regular pulsations, like the ticking of a watch, it sometimes surprises those that are strangers to its nature and properties, who fancy its beating portends a family change and the shortening of the thread of life. Put into a box, it may be heard and seen in the act of pulsation with a small proboscis against the side of it, for food more probably than for hymeneal pleasure, as some have fancied."

The well-known lines of the witty Dean of St. Patrick's identify the death-watch with some kind of wood-worm; whether he had any knowledge of the matter and was speaking of the larvæ of *Anobium tesselatum*, which some writers affirm do also produce the ticking sounds, is doubtful. The following are his lines:—

"A wood-worm
That lies in old wood, like a hare in her form,
With teeth or with claws it will bite, or will scratch,
And chambermaids christen this worm a death-watch;
Because, like a watch, it always cries click:
Then woe be to those in the house who are sick;
For as sure as a gun they will give up the ghost,
If the maggot cries click, when it scratches the post.
But a kettle of scalding hot water injected,
Infallibly cures the timber affected;
The omen is broken, the danger is over,
The maggot will die, and the sick will recover."

Brand quotes from the "British Apollo," vol. ii., No. 70. To an inquiry "concerning a death-watch, whether you suppose it to be a living creature," answer is given, "It is nothing but a little worm in the wood." And again from the "Secret Memoirs of the late Mr. Duncan Campbell" (Lond., 1732, p. 61), "How many people have I seen in the most terrible palpitations, for months together, expecting every hour the approach of some calamity, only by a little worm which breeds in wainscot, and endeavouring to eat its way out, makes a noise like the movement of a watch!"

The early volumes of the "Philosophical Transactions" contain some interesting matter on the subject of the insects known as death-watches. According to the observations of Mr. Benjamin Allen, the ticking in question is produced by the beetle *Scarabæus galeatus pulsator*,* that is, the *Anobium tesselatum* of modern systematists. This writer, who kept living specimens for several days, says the beetle produces the sound "by beating his head on the subject fit for sound. The part it beats with is the extreme end of the edge of the face, which I may call," he adds, "the upper lip, the mouth being protected by this bony part and lying underneath, out of view."

We now come to the remarks of the learned and observant William Derham, who, in a letter to the publisher of the "Phil. Transactions" "concerning an insect that is commonly called the death-watch," dated Upminster, July 21st, 1701, says he has observed two sorts of these insects. The first is clearly an *Anobium*, and probably *A. tesselatum*, the second is the little louse-like animal to which I have already referred, the *Atropos pulsatorius* of modern entomologists. Of the beetle, Mr. Derham remarks that he kept two specimens alive in a box (a male and female), for about three weeks, in the month of May, and that he could make one of them beat whenever he pleased by imitating his beating. As to the beetle's motive in producing the sound, he was perfectly satisfied from ocular evidence that "these pulsations are the way whereby these insects woo one other." With reference to the mode by means of which the ticking is produced, Mr. Derham differs from Mr. Allen, who asserts that it is made by "the extreme edge of the face, which may be called the upper lip," and states that he "observed the insect always to draw back its mouth and beat with its forehead." We have already seen that Baxter was acquainted with the *Atropos pulsatorius*, which he describes as "a little, nimble, running worm, just like a louse, but whiter and quicker," and that he attributes the ticking noise to this insect which he had "oft found by trial" to be the case. This, so far as I have been able to trace the matter, is the earliest account extant of the ascription of the death-watch sounds to the *Atropos pulsatorius*. But observations in natural history require to be made with great care, and Baxter was no naturalist; and probably his remarks would have appeared questionable, had they not been completely verified by the observations and experiments of Derham, who, however, does not appear to have been in any degree aware that the non-conformist divine had anticipated his own discovery. The following is Mr. Derham's account of *Atropos pulsatorius*:—

"The other death-watch is an insect in appearance quite different from the last [*i.e.* the *Anobium tesselatum*], which I lately discovered about the beginning of this July. The other death-watch [*i.e.* the beetle] beateth only about seven or eight strokes at a time and quicker, but this will beat some hours together without intermission, and his strokes are more leisurely, and like the beats of a watch. I have several years observed these two sorts of beating, but took it to be made by one and the same animal. The insect which makes this long beating is a small greyish insect, much resembling a louse when looked on only with the naked eye. For which reason (for want of another name) I call it *Pediculus pulsatorius*. It is very nimble in running

* An account of the *Scarabæus galeatus pulsator*, or the death-watch, taken August, 1695. "Phil. Trans.," vol. xxi. p. 376.

to seek its shelter when disturbed. It is very common in all parts of the house in the summer months. They are extremely shy of beating when disturbed, but will beat freely enough before you, and also answer you when you beat, if you can view them without giving them disturbance, or shaking the place where they lie, &c. I cannot tell whether they beat in any other thing, but I have heard their noise only in or near paper. Concerning their noise, I am somewhat in doubt, whether it be made by beating their heads, or rather snouts, against the paper; or whether it be not made after somo such manner as grasshoppers and crickets make their noise. I rather incline to the former opiniou. But my reason of doubting is, because I have observed the animal's body to shake, or give a sudden jerk at every stroke, but I could scarce perceive any part of its body to touch the paper. 'Tis possible it might beat the paper and I not perceive it, by reason its body is small and near the paper when it beateth, and its motion in beating is sudden and swift."

As to the motive of the ticking noise, Mr. Derham was satisfied that it is a call between the sexes, as in the case of *Anobium*. Whocver has examined this frail little insect under consideration, cannot have helped entertaining doubts as to the accuracy of those observations which assign to so minute a crcaturc a sound so loud and distinct, and thus Mr. Derham writes—

"I have often, heretofore, by the noise pursued the makers of it, but have thought myself disappointed when I found nothing but some of these *pediculi*, which I did not perceive to beat, and which I little imagined could have made so sonorous a noise as I have heard some of them do, even as loud almost as the strongest beats of a pocket watch. But lately finding a piece of paper in my study in which I was sure the beating was, and it being luckily loosely folded, so as to be viewed throughout, and also happening to be in a good light, I strictly viewed it, but could only see some of these pediculi. And viewing them with a convex-glass, I soon perceived some of them to beat or to make a noise, with a sudden shake of their body, as hath been described. And I am now so used to, and skilful in the matter, as to be able to see and shew their beating, almost when I please, by having a paper with some of them in it conveniently placed, and imitating their pulsations, which they will readily answer."

In a paper written subsequently to the forcgoing, the author repeats his asscrtion that the ticking noise is a *wooing act*, and remarks that it is commonest about July. He then adds that he scarce ever heard them beat before July, but that all or the greatest part of July they beat, and in the beginning of August. Hc had heard the beatings till the 16th of August, but never later. The insects "do not every year beat alike, but sometimes sooner, sometimes later; sometimes much, sometimes little, according as the year favoureth or hindereth their inclinations." *

In Kirby and Spence's "Introduction to Entomology" (ii., p. 386) we read—

"Authors were formerly not agreed concerning the insect from which this sound of terror proceeded, some attributing it to a kind of wood-louse [*i.e.* the louse-like *Atropos*] as I lately observed, and others to a spider; but it is a received opinion now, adopted upon satisfactory evidence, that it is produced by some little beetles belonging to the timber-boring genus *Anobium*, *F.*

"Latreille observed *Anobium striatum*, *F.* produces the sound in question by a stroke of its mandibles upon the wood, which was answered by a similar noise from within it. Both the species whose proceedings have been most noticed by British observers is *A. tesselatum*, *F.* When spring is far advanced, these insects are said to commence their ticking, which is only a call to each other, to which if no answer be returned, the animal repeats it in another place. Raising itself upon its hind legs, with the body somewhat inclined, it beats its head with great force and agility upon the plane of position; and its strokes are so powerful as to make a considerable impression if they fall upon any substance softer than wood. The general number of distinct strokes in succession is from seven to nine or eleven. They follow each other quickly, and are repeated at uncertain intervals. In old houses, where these insects abound, they may be heard in warm weather during the whole day. The noise exactly resembles that produced by tapping moderately with the nail upon the table, and when familiarized, the insect will answer very readily the tap of the nail."

Kirby and Spence in the above passage take no notice of Mr. Derham's remarks upon *Atropos pulsatorius* in the "Phil. Transactions," and pass over this latter insect's claim to a death-watch without further remark. In Carpenter's and Westwood's edition of Cuvier, p. 580, the only mention of *Atropos pulsatorius* is the following:—

"We generally find in books of collections of plants the *P.* [*Psocus*, Latr.] *pulsatorius*, of a whitish colour, and which has been believed to produce the slight noise like the ticking of a clock, often heard in houses, whence its specific name."

Rennie in his "Insect Architecture" (p. 266, Lond., 1857) identifies the *Atropos pulsatorius* as one of the death-watches; but it does not appear from his remarks that he had ever had ocular demonstration as to the mode in which the insect produces the sounds. He says:—

"The most common of the solitary species [of Termites] must be familiar to all our readers by the name of wood-louse* (*Termes pulsatorium*, Linn.; *Atropos lignarius*, Leach), one of the insects which produces the ticking superstitiously termed the *death-watch*. It is not so large as the common louse, but whiter and more slender, having a red mouth and yellow eyes. It lives in old books, the paper on walls, collections of insects and dried plants, and is extremely agile in its movements, darting by jerks into dark corners for the purpose of concealment. It does not like to run straight forward without resting every half-second, as if to listen or look about for its pursuer, and at such resting-places it is easily taken. The ticking noise is made by the insect beating against the wood with its head, and it is supposed by some to be peculiar to the female, and to be connected with the laying of her eggs. . . . Another death-watch is a small beetle (*Anobium tesselatum*)."

In the second volume of the "Magazine of Natural History" (p. 461), there is the following communication relative to death-watches:—

"These little creatures, whose portentous click once made stout hearts quail, and still inflicts no small terror on many an ancient dame, even in these days of enlightenment, are thus described by Mr. Carpenter:—

"'This singular noise proceeds from two different insects. One of these, the *Anobium tesselatum*, is coleopterous, of a dark colour, and about a quarter of an inch in length. It is chiefly in the latter end of spring it commences its noise, which may be considered analogous to the call of birds. This is caused by beating on hard substances with the shield or fore-part of its head. The general number of successive distinct strokes is from seven to nine or eleven.

* A Supplement to the account of the *Pediculus pulsatorius*, or death-watch, in "Phil. Trans.," No. 271, serving to the more perfect Natural History of that insect by the Rev. W. Derham, F.R.S.

* This term is now popularly applied to the Crustaceous animal of that name.

These are given in pretty quick succession, and are repeated at uncertain intervals. In old houses, where the insects are numerous, they may be heard, if the weather be warm, almost every hour of the day. In beating, the insect raises itself upon its hinder legs, and with the body somewhat inclined, beats its head with great force and agility against the place on which it stands. This insect, which is the real death-watch of the vulgar, must not be confounded with a minuter insect, not much unlike a louse, which makes a ticking noise like a watch; but instead of beating at intervals, it continues its noise for a considerable length of time without intermission. This latter insect, the *Termes pulsatorium*, Linn., belongs to a very different tribe (Neuroptera). It is usually found in old wood, decayed furniture, museums, and neglected books. The female lays her eggs, which are exceedingly small, in dry, dusty places, where they are likely to meet with least disturbance. They are generally hatched about the beginning of March, a little sooner or later, according to the weather. After leaving the eggs, the insects are so small as scarcely to be discerned without the use of a glass. They remain in this larva state about two months, somewhat resembling in appearance the mites in cheese, after which they undergo their change into the perfect insect. They feed on dead flies and other insects; and often from their numbers and voracity very much deface cabinets of natural history. They subsist on various other substances, and may often be observed carefully hunting for nutritious particles amongst the dust in which they are found, turning it over with their heads and searching about somewhat in the manner of swine. Many live through the winter buried deep in the dust to avoid the frost.' "

The above extract contains nothing more than what had been previously communicated to the Royal Society by Mr. Derham in his "Supplement to the Account of the *Pediculus pulsatorius*," and it loses its importance from the fact that it does not appear to be the result of personal observation.

The seventh volume of the "Magazine of Natural History" (pp. 468–473), contains some original observations on the death-watches, from which it is clear that another beetle besides the *Anobium tesselatum* produces the sounds in question; this is the *Anobium striatum;* and from the investigations of Mr. Westwood, there seems no reason whatever to doubt that similar noises are produced by the larva, as well as the perfect insects. Anyone who has examined the larva of *Anobium tesselatum*, and observed its strong teeth, can readily understand that it is quite able to make the noise attributed to it, by gnawing the wood with its jaws.

That the *Atropos pulsatorius* is the cause of the sounds under consideration is denied by Van der Hoeven, who thus writes:—

"This insect is commonly found on wood, upon walls, in old papers, &c.; it has superficially a resemblance to a louse, but runs very rapidly. The Latin specific name is derived from the idea that the ticking in old furniture and door posts, which superstition often receives as a bad omen, is caused by this insect; on the contrary, they are small beetles which cause the tapping sound" (*Handbook of Zoology*, Lond., 1856, i., p. 426).

Westwood, on the other hand, allows to the *Atropos pulsatorius* the claim to be considered a death-watch, but it does not appear that this eminent entomologist had any practical acquaintance with the fact.

Mr. Frank Cowan in his recently published book * (p. 58) assigns the name of death-watch to the *Anobium tesselatum* alone, taking no notice of the *Atropos* beyond what is given in the following sentence—

"Authors were formerly not agreed concerning the insect from which this sound of terror proceeded, some attributing it to a kind of wood-louse, others to a spider."

These are the identical words of Kirby and Spence. Being anxious to ascertain whether any living entomologists had personal experience of the noise asserted to be produced by the *Atropos pulsatorius* in the writings of some naturalists, and denied in those of others, I wrote to Mr. Frederick Smith to ask whether he had any knowledge of the matter. He replied that he was unacquainted with any ticking noise produced by the *Atropos*, but, of course, had frequently heard the sounds of *Anobium*. In a subsequent letter he writes:—

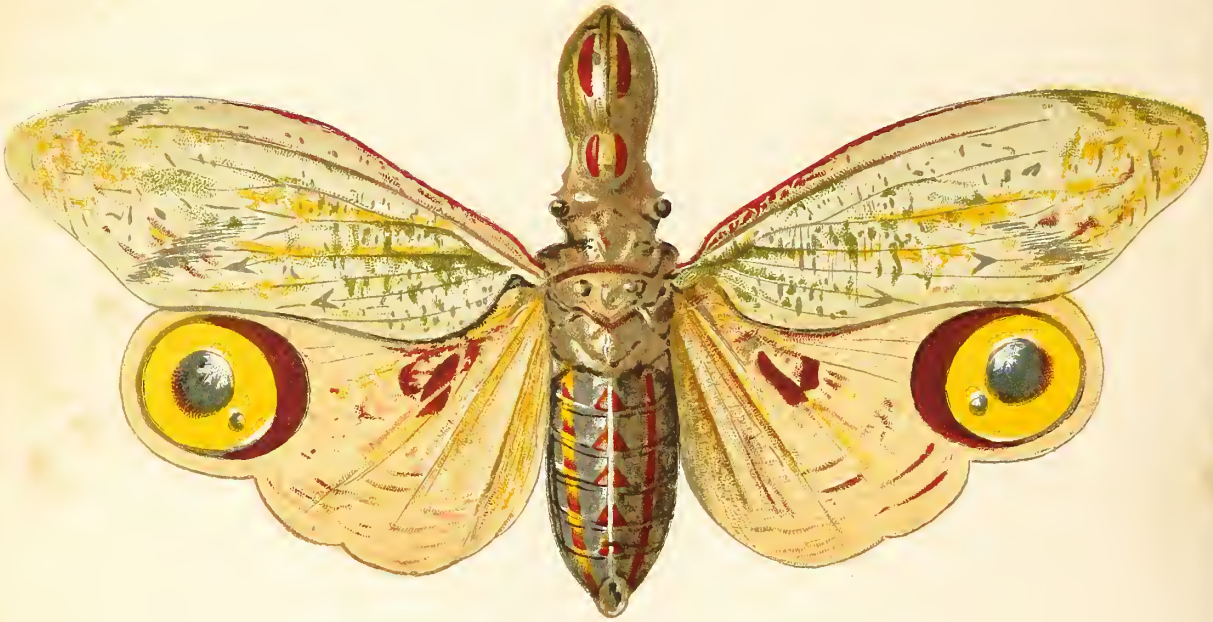
"Last evening (December 4, 1865), I brought the subject of the death-watch, &c., before the meeting of the Entomological Society, but no one had any knowledge of *Anobium*, *Atropos*, or any insect tapping; many had, of course, heard the ticking *inside* chairs, tables, old chests, &c.; that was all I could get at."

Mr. Smith could not conceive it possible that so soft and delicate a creature as *Atropos* could produce any sound whatever.

Soon after this I was favoured with another communication from Mr. Frederick Smith—always so obliging in rendering assistance to inquirers—together with a letter from Mr. Doubleday; this latter gentleman, from his own observations, entertained no doubt that *Atropos pulsatorius* was one of the insects that produced the sounds in question; and an interesting communication from Mr. William Noble to a recent number of "Science Gossip" (April, 1866), seems to place the matter beyond all doubt, and to verify the remarks of Baxter, Derham, and others. Mr. Noble writes as follows:—

"On the night of Sunday, the 23rd of July last, I was sitting reading in my drawing-room, after the rest of the family had retired to their rooms, when my attention was attracted by what sounded like the loud ticking of a watch near to me. My first impression was, that my own watch, from some occult cause, was making much more noise than usual; but on pulling it out I at once ascertained that it was not thence that the sound proceeded. Ultimately I traced it to the mantel-piece, though scarcely (on this occasion) to any specific part of it. So remarkable was the imitation of the tick of a watch, so perfect the metallic ring, and so utterly unlike anything which could conceivably be produced by an insect, that I fetched down one lady who had not commenced undressing, to come and hear it. After this we used to amuse ourselves every night by listening to the ticking, until eventually, in October, I determined to find out by what means it was produced. Upon careful examination I traced it to one of the lustres, which by way of experiment, I removed to a distant table. The first disturbance silenced the insect, but a few minutes' quiet reassured it, and on it went again. Finally, I tracked it to a French paper-rose surrounding the base of the candle; and upon striking this sharply upon the table there fell out a specimen of the *Atropos pulsatorius*. This I examined under the microscope, and I must say that I was quite as much astonished as Mr. Smith could possibly be to see the extraordinary minuteness and delicacy of the creature, which had so perfectly similated the hard metallic ring of a chronometer

* *Curious Facts in the History of Insects.* Philadelphia, 1865 (p. 58).



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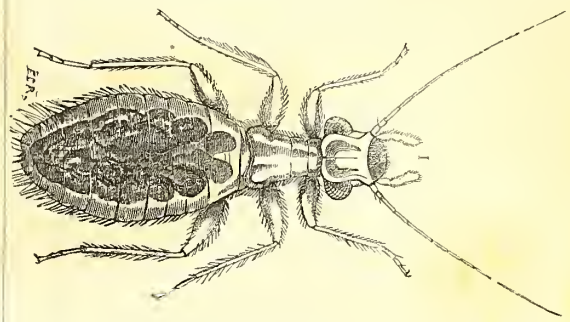
balance. Unfortunately I squeezed my captive to death in trying to confine him in a live-box, and so put an end to him and the ticking by one operation. After this, for a month or two all was silent; when one night towards the end of the year, whilst sitting over the fire, my ears were saluted by the well-remembered sound. *Experientia docet*, so I straightway removed the lustre from the chimney-piece, and after listening to satisfy myself that I had my friend safe, removed the rose from the base of the candle, and as before, by a sharp tap on the table, knocked the *Atropos* out of it. I killed him or her at once, intending to have mounted the specimen as a microscopic object, but from the extreme softness of the body, it squeezed up into an amorphous mass when I attempted to flatten it. From that time up to the present date I have heard no more ticking, and so infer that I must have destroyed a pair which had taken up their abode in the candle ornament, and whose untimely decease has cut off a possible generation of the *Atropos pulsatorius*."

I may mention that a friend of mine told me that the summer before last he heard a peculiar ticking sound proceeding from a picture-frame in his sitting-room, and that upon his taking the frame from the wall on which it hung and placing it upon the table, he continued to hear the same sounds; anxious to discover the author of them he took the frame to pieces with the greatest care, and discovered within it a minute spider, and a specimen of what, from his description of it, I doubt not was an *Atropos pulsatorius*. I think this matter, so long a *quæstio vexata*, has been thus finally set at rest, and that *Atropos pulsatorius* is certainly one of the insects popularly known as death-watches.



Since the above was written I have examined a number of these minute insects, which I find abundantly in my house. The *Atropos pulsatorius*, which is about one line in length, is entirely destitute of wings, the female is broader than the male, and has the antennæ much longer. The sex can readily be distinguished by pulling the body in two with the points of two needles; the reproductive organs may then be readily seen under the microscope. I have not yet succeeded in my endeavours to hear the ticking sounds.

A FEW WORDS UPON THE LUMINOSITY OF LANTHORN-FLIES.

By Arthur G. Butler, F.Z.S., Assistant, Zoological Department, British Museum.

HOW frequently we find that things which appear to some men most probable, seem to others most fit subjects for question and debate. The well-worn adage, "seeing is believing," is still made use of, notwithstanding its threadbare condition, and probably will be so long as the world lasts; this, perhaps, is to a great extent owing to the vulgar notion that it shows sound sense *not to believe everything that you are told:* yet this sceptical spirit cannot surely be an evidence of a powerful intellect, for we see it strongly developed in the most illiterate.

Familiar as we all are with the glow-worm, and knowing its luminous properties, we should laugh to scorn any attempt to shake our faith in the reality of its phosphoric brilliance; yet, just such an attack has been made by the scientific men of the present day, upon the fair reputation of another of night's starry wanderers.

Let us cross the Atlantic, and visit the dense forests of South America, where strange birds with gorgeous plumage utter their varying notes; where those brilliant metallic butterflies, the Morphos and Apaturas, take their bold flight through the splendid tropical foliage, and summer, ever present, perpetuates the earthly paradise. Then, when evening with rapid stride closes upon the scene, Nature, ever prodigal of her treasures, brings forth the beautiful lanthorn-fly, which enlivens the gloom with its little lamp, and by its numbers makes us almost fancy that the stars of heaven have descended to welcome us. Listen! it is singing as it flies, like some small elfin of the night.

Yet, alas! the luminosity of this insect has been denied by savants, who having wandered far from their native land, leaving all the comforts and delights of home for the express purpose of searching out nature's secrets, return from their toil and tell us that our flying lanthorn is but a lanthorn of the brain, invented no doubt by some light-headed person; and as proof of this, they say that they have often seen the insect, but not its light:—

> "Sir, of my judgment you 'll allow,
> I've seen, and sure I ought to know."

Ay, some go even farther. Dr. Hancock asserts that the whole of the native tribes of Guiana agree in treating the idea as fabulous; he considers the whole story an invention of Europeans desirous of assigning some use to the curious diaphanous projection resembling a horn lanthorn in front of the head of the insect; he also states that it seldom sings.

And, perhaps, it might appear presumptuous on our part entirely to disagree with these experienced naturalists, did we not believe that some explana-

tion of the non-appearance of luminosity in *Fulgora* might be given. Those who have studied the economy of the glow-worm and other well-known luminous insects, will agree with us, that the brilliant light which the creature emits is the lamp of love, and burns only at that season in which—

> "So like a bride, scented and bright,
> She comes out, when the sun's away."

We well remember taking home a glow-worm, just such a one as many of our young readers may have seen in that interesting little book, entitled "The Butterflies' Ball and Grasshoppers' Feast;" and placing it in our London garden, we many a night had the pleasure of watching its soft green lustre; but one night, alas! it had vanished. Before going to bed, however, we threw up the window and, gazing downwards, perceived, as we thought, two glow-worms glistening below us; suddenly they vanished, and now again we saw them moving rapidly above our garden wall—they were only the eyes of a cat! The true glow-worm had ceased to shine, for its luminous season had passed.

If, then, these insects have their seasons of brightness, why should not the lanthorn-fly also have a set time in which to light its lamp?

Dr. Hagen certainly appears to take this view: he says, "May it not possibly be the case that *Fulgora* is only luminous at certain seasons?" He also proposes another explanation of the mystery, namely, that the luminosity may be confined to one sex, this being, according to all analogy, extremely likely.

As to the reality of the luminosity of this insect at times, the following facts seem to our mind conclusive:—

As far back as 1685, Nehemiah Grew, M.D., notices the fact; he, however, states that the Indians fasten two or three to a stick, and thus obtain sufficient light to work, or to travel by. Now, although Mr. Grew gives a figure of the *Fulgora*, it is possible that he may in this matter have been misinformed, as the very thing is known to be done with the *Elater noctilucus*, or fire-fly.

Madame Merian, in her work upon the insects of Surinam, not only asserts her belief in it, but informs us that the first discovery which she made of this property caused her no small alarm. The Indians had brought her several of these insects, which, by day-light, exhibited no extraordinary appearance; and she enclosed them in a box until she should have an opportunity of figuring them, placing it upon a table in her lodging-room. In the middle of the night, the confined insect made such a noise as to awaken her, and she opened the box, the inside of which, to her great astonishment, appeared all in a blaze; and in her fright letting it fall, she was surprised to see each of these insects apparently on fire. She soon, however, divined the cause of this unexpected phenomenon, and reinclosed her brilliant guests in their place of confinement. She adds, that the light of one of these flies is sufficiently bright to read a newspaper by.

In opposition to this, it has been urged that Madame Merian was sometimes incorrect in her statements, in support of which it is said, that she asserts the fact of the large American spider, *Mygale avicularia*, feeding upon small birds; yet this is not so supremely ridiculous an idea as might be supposed, for in Mr. Bate's *Naturalist on the Amazons*, we find the same truth recorded.

In 1837, Mr. R. M. Martin fully corroborates the truth of the luminosity of the lanthorn-fly in the "History of the West Indies," vol. ii., page 184 (vol. v. of the British Chemical Library). We need not, however, go so far back for information on this head; in 1858, Dr. J. A. Smith exhibited a specimen of the *Fulgora laternaria* at a meeting of the Royal Physical Society of Edinburgh, and he observed that it was still an undecided question amongst naturalists whether these flies were really luminous at any time; it was therefore of importance that the undoubted evidence of eye-witnesses should be produced. Mr. Banks, of Prestonpans, who had forwarded the specimen exhibited, was therefore at once requested to obtain further information from his correspondent on that particular point.

On the 27th of April, 1859, at a subsequent meeting of the same society, Mr. James Banks communicated through Dr. Smith, the reply of his correspondent at Honduras to the question raised at the society. Mr. Banks had received several letters upon the subject of the luminosity of *Fulgora*, and they all bore testimony to the truth of the statement, that this fly emits light. A letter from Mr. Alexander Henderson, of Belize, furnished the following details:—

> "In answer to the question, 'Is it really luminous?' certainly the fly possesses light, and therefore emits it. The light is evidently under control, for it increases and diminishes at pleasure. When the wings are closed there are three luminous spots on each side of the head-piece on the upper part (like a cat's staring eyes) of a beautiful sulphur-coloured light, in rays that spread over the room. The third luminous spot is seen when the fly is on its back, half-way down the abdominal part of the insect. When quiescent the lumination is least; in daylight the upper spots are nearly white, emitting no light whatever (its lively time is at twilight). Immediately on being agitated, or moving about, the spots become sulphur colour and radiate forth streams of light, clearly seen, although the sun be shining into the room, as it now does at the moment I write, with the creature in the glass tumbler before me. We shut out the light, and to test the power of the fly I took up a book and read two verses of the 109th Psalm. Mr. Robert Gregg also took up a book and read by its light. I hope this will satisfy all, that the lanthorn-fly is luminous."

Notwithstanding all this, we see in the *Zoologist* for 1863, that Mr. Robert John Jeffry, of New Grenada, cannot tell why it is called the "lanthorn-fly," for it gives no light; he imagines that the use of the subdiaphanous projection is to prevent the poor stupid insect from injuring itself by knocking against hard substances during flight, the head at such times acting as a sort of buffer. Mr. Kirby, however, who believed in the luminous properties of the insect, imagined that the lanthorn which must necessarily precede the insect when on the wing, might act the

part of a guide, enabling the insect to discover its prey, and to steer itself safely in the night.

As with the *Fulgora laternaria* of America, so is it with the *Hotinus candelarius* of China. Mr. John Bowring, who for many years resided in China, where he made vast additions to his splendid collection of beetles, asserts that he never observed any luminosity about it: however, in the year 1864, we heard Count Christian Zedlety d'Enzenberg, an officer in the Austrian service, affirm that he had seen it shining brilliantly at night, and that the luminosity flashed out at intervals, like a revolving light; he also said that one evening whilst strolling through the streets he observed a crowd of Chinese gathered round a house, a look of perplexity on each countenance; upon the wall above them was a brilliant greenish light. The count, who was a practical man, instead of gazing and gaping, with the words of that beautiful rhyme of our childhood stamped on his forehead—

"Twinkle, twinkle, little star,
How I wonder what you are,"

took his walking-stick and knocked the object down, and, as he had expected, it turned out to be a flying candle: he picked it up and took it home to show to some friends, who, as he thought, might not previously have seen the phenomenon.

Mr. Smith, of the British Museum, who also heard this story told, related to us an incident which had occurred within his own experience: he said that he once had a box of Chinese insects before him, when, of two sailors that stood by, one exclaimed to the other, pointing to the *Hotinus candelarius*, "See here, Tom, here's one of the flying candles that we used to catch in our hats along shore at night in China." Mr. Smith, who had not drawn their attention to the insect, or mentioned the circumstance of its coming from China, then asked them if they were sure that it shone at night. "Well," he replied, "those we saw were just like this one, only they were red instead of yellow." Now it is undoubtedly true that the Chinese lanthorn-fly, although blood-red when alive, changes to yellow after death, and as the sailor was correct in this part of his story, we may surely give him the credit of making no mistake as to the fact of the insect's luminosity.

We trust that time will solve the mystery, and clear the fogs of doubt that hover about the luminous path of these most interesting insects, and then we shall again be able to applaud the old saying,—

"Magna est veritas, et prevalebit."

In our plate we have given figures of three of the most striking Lanthorn-flies,—

Hotinus candelarius, fig. 1.
Hotinus maculatus, fig. 3.
Fulgora laternaria, fig. 2.

BEFORE BREAKFAST, ON THE BRIDGE OF LISMORE.

By W. Peard, M.D.

I HAD been hard at work, and wanted rest. It was therefore with no ordinary delight that, early in July, I received an invitation from a friend to visit him on the banks of the Blackwater. The offer was gratefully accepted, the answer was written *currente calamo*, and, following hard on the heel of my letter, I was soon racing down the Great Western by the morning express.

There was a quaint aspect about Bristol that was quite refreshing. As we drove through Redcliffe Street, houses so old that Sebastian Cabot might have supped there, seemed to lean forward in order to take a nearer view of us. Over grey roofs, over lofty chimneys, towered the spars of many a ship, enjoying a questionable sort of holiday on the stagnant waters of the Float. Then, how glorious were the rocks through which our vessel glided, with a slow and stately motion! how green the lovely woods of Leigh! Yonder lay Pill, immortalized by Macaulay, now dozing, as it always does doze in fine weather, on the margin of its muddy creek. White and ghost-like shone the lighthouse in the evening sunshine; wider grew the Channel; the lazy waves gave us the kiss of peace as we flew onwards between the Holmes. One by one the lamps were lit far off in the sky; one by one lights shone out from many a Devonshire cottage perched on the slopes of her blue hills: it was a summer night, in all its glory. I had long been a prisoner amongst bricks and mortar; care and work were for the time cast off. I was supremely happy, and felt in my inmost heart all the power of the sweet spells which nature was weaving round me.

The first sight that met my waking eyes was the Quay of Waterford. Companies and regiments of pigs were marching down for embarkation, with a discipline never attained except by Celtic swine, and apoplectic oxen were patiently waiting their turn to go on board.

"Kar, your honour? It's for the station your honour is? Out of the way, gintlemen" (to the pigs). "Here I am. Where's your honour's luggage?"

Three or four "free companions" seized my property, and disappeared in the general *mêlée;* nor was it without devout thankfulness that, after fighting my way safely through the tumult, I found the baggage already packed on the vehicle which was to bear me to the station.

Fortified by breakfast at Cahir, for the second time we committed ourself and our personals to the care of an amiable savage, possessed of a minimum of nose and a maximum of mouth, and set out on the next stage of our journey. The great mountain tract which extends from Waterford on the east

coast to Dingle Bay on the west was before us; slowly we mounted one spur after another, paused to rest by a lonely lake, and again resuming our pleasant pilgrimage, at last halted on the summit. Far below, on either side, stretched an interminable expanse of heather, now in richest bloom. To the north lay the fertile plains of Tipperary, to the south the golden valley of the Blackwater; whilst on the east towered the purple peak of Knock-meldawn. Twilight was falling when we reached the hotel in the episcopal town of Lismore, and a short stage would have carried me to my friend's house; but that stage implied another hour's jolting. I was dead tired, and had the Dean and Chapter asked me to "move on," I should have answered "No."

Somnus is a partial deity; in the town he bestows on his worshippers lethargy, in the country gives them the blessing of rest. How light and refreshing were my slumbers. All night I felt the sweet breath of the fields on my cheek; heard the leaves whispering to each other; and was broad awake when the martins brought the first instalment of breakfast to their children in the mud cabin above my window. The cathedral clock was striking five as I stood in the street. The little place looked so clean and thriving, that it seemed less like an Irish than an English town. "The Mall" evidently held a resident gentry; you might have sworn, without fear of perjury, that the curate and the doctor, the lawyer, half a dozen maiden ladies, and his reverence Father Mahony, P.P., lived there. But here, punctual as the hour, comes my old professional man, Mr. Ray.

"Well, Ned; I see Tim delivered my message."

My companion gave me a warm welcome, *more Hibernico*, and then proceeded to business.

"I suppose it's to the bridge your honour'll be going?"

The distance did not probably exceed two hundred yards; eager fingers screwed the rod together and passed the line through the rings; in another minute the small flies were falling and eddying over the high arch towards the tail of the long pool ABOVE.

Light fell the line, but in vain; again, and again, and again the cast was repeated, without producing any more favourable result.

"I s'pose we must change," remarked Mr. Ray, who had been standing silent and disconsolate at my left shoulder. "This an't like what you remember it, before the queen put them bastes of gaps in the weir there, and spiled the best bit of wather in the howl kingdom of Ireland. It's all ready, your honour; but it an't the least use in life. Sure ye didn't rise him?" noticing an upward motion of the rod. "Holy Mary! but he's stuck in him."

The fish was light, but the ground was unfavourable. If the salmon dashed straight ahead, it was quite possible to be "run out;" it was still more likely that, when half done, he might drop down the current under the arch: in either case there was a difficulty, the danger being in the ratio of the size. There was, however, little fear of losing the small but active grilse now on the rod from either of these accidents. From our elevated position, every movement of our agile foe could be seen plainly; and the marvel was how the slight hook held him, even for a moment. Now he spins round and round like a dancing dervish; then he darts like an arrow into the deeps above: but slower grows the pace, those desperate leaps have broken his heart, his race is nearly run, the polished steel is near him—now a foot—another inch! There was a slight splash, the line grew slack, and leaning over the parapet, I could see Mr. Ned, in the meadow below, carefully extracting the fly from our first fish for the day.

My professional friend had one fault—his deliberation was maddening. If the poor fellow ever had an enemy—which I doubt—he would have called it laziness, apathy, carelessness. The imperturbable one had some distance to come round; but when at last he did arrive, his constitutional tranquillity for once deserted him, as he cast a hurried glance upwards at the arching rod, and then into the stream below. It was a time for action, not discussion, for we were "fast" in a stout salmon, whose furious runs and desperate summersaults demanded full attention. Up to this time, however, matters had gone smoothly, the fish keeping well up the water; but we could not be blind to the danger of his gradually dropping down with the current under the arch as strength failed him; in which case, with so heavy an adversary, we should be ruined beyond redemption. The crisis was at hand; unable longer to resist the combined forces of the stream and a hundred and twenty yards of line, "faint, but fighting still," slowly, but, alas! too surely, he began to give ground. Now he is within twenty—within ten yards of the bridge; now under, now BELOW!

With the butt at the level of my head, and the point towards the water, I leaned desperately over the parapet, endeavouring, by the elasticity of the rod, to check my friend's progress on the road to ruin. It is said, "a wilful man must have his way," and a more headstrong individual than the one in question I trust never to meet. Down, down, still down—three minutes more, and I should be ruined. In the moment of peril true genius shows itself.

Connected with the southern end of the parapet was a low wall bounding a plantation belonging to the Castle. Once there, we were on a level with the river. I could pass under the arch, and follow the fugitive; but, alas! there were some twenty feet of empty air between that low wall and the ground. All this flashed through my mind in an instant; but, brief as that space was, the danger was so much the nearer. Giving full play to the wheel, I dashed down the road, leaped on the masonry, and thrust the rod into Mr. Ned's astonished hands. Grasping the coping, and dropping to the full stretch of my arms, I let go my hold, and, by great luck, fell lightly on my feet. Swiftly but carefully the rod was lowered; in another second it would have been too late, for the barrel of the wheel shone brightly through the few yards of line which yet remained. With a shout to my companion, I rushed on, and in a dozen strides was

on the bank. Turning my head whilst at full speed, I saw a heavy body in the act of falling; there was a dull thud, as when a hundred-and-fifty-pound shot strikes an earthwork, and then a crashing sound, accompanied by a dismal groan.

I was going three feet to the fugitive's one, and soon he was "under the rod," laying like a helpless log on the surface. At this critical moment, Mr. Ray limped up, gaff in hand, and did his *devoir* like a true knight.

When we again reached the bridge, the shade thrown on the river by the masonry had nearly passed away; high in the cloudless heavens marched the sun in his might; over the lofty trees rose the towers of the princely castle where John of Anjou once revelled. In mid air the rooks wheeled and circled in their happy flight, whilst many an anchorite thrush was offering up his sweet orisons.

"It's all over for *this* morning," observed Mr. Ray. My thoughts had been mounting up to the rooks yonder, perhaps farther; his were fixed on earth.

"Well, he *is* a beauty! one-and-twenty pounds, I'll go bail; not a bad morning's work, and before breakfast too. I think your honour won't forget the Bridge of Lismore in a hurry."

MARKS AND MONOGRAMS, POTTERY AND PORCELAIN.*

WE may class as Romano-British pottery all earthenware of the period of the Roman occupation, whether imported or manufactured in the island. Within the last twenty or thirty years many fresh specimens have been discovered, and the improvements in the metropolis and other towns have led to excavations laying bare most valuable remains, of which the zeal of antiquaries has not been slow to take advantage. Mr. Chaffers himself has done good service by his researches among the city excavations, "especially those for the Royal Exchange, which afforded him opportunities of saving from destruction many interesting relics of ancient art and objects illustrative of the manners and customs of the Romans in Britain." He alludes with proper acknowledgment "to the labours of others in the same field," and notably those of Mr. C. Roach Smith, to whose "Illustrations of Roman London" he refers those who wish for more detailed information. A sketch of a section of a cutting made in Cannon Street, in 1851, gives an excellent idea of the succession of accumulated strata on which modern London has been built, and of the relative position of Roman and English pottery discovered there.

The earthen vessels of Roman manufacture discovered in London, from which Mr. Chaffers's illustrations are almost exclusively taken, consist of plates or dishes, vases, bowls, cups, lamps, and cinerary urns; and the ware of which these are composed are chiefly Samian, Aretine, and Castor. The two former were importations, the last was produced in England from British clay. There are, too, some other instances of Roman fictile work with British material, to which no particular name or locality has been assigned.

SAMIAN was a red lustrous ware, first made in Samos, whose potters were celebrated 900 B.C., and which the Romans of the better class used for ordinary table service. It appears probable that hence "Samian" became a general term applied to all commoner earthenware, wherever made, among the Romans, of this same red colour, which was produced by tinting the clay with ochre—a practical answer to the Horatian question, *Quid concinna Samo?* It is not clearly stated whether the original Samian of the island of Juno derived its colour in the same way, or from the natural red of the clay. Mr. Marryat attributes the extended use of the name to the excellent quality of the ware, "as deserving from its perfection to be compared with that of Samos."* Specimens have been found almost wherever there were Roman settlements, and in France and Germany Roman kilns and moulds have been discovered, supposed to be for the manufacture of this ware, though the evidence is not considered by our author to be quite satisfactory. From these it is believed that this colony was supplied, for no such kilns have yet been found in England. The method pursued by Roman potters in Germany, where, as at Heiligenberg, near Strasbourg, and at Cologne, moulds have been discovered, appears to have been as follows:—

"Stamps, with handles either of bronze or baked clay, were modelled in relief with patterns, devices, and potters' names; these were employed to impress an incuse pattern on the interior of a general mould of soft clay, capable of containing the vessel in one piece, the interior being first rounded smoothly into a perfect form by the lathe. The mould thus covered with the required pattern was fired, and became perfectly hard for future use. The moist paste of which the vessel was made was then pressed into the mould by hand, so as to obtain a perfect impression of all the minute details. The irregular surface of the interior was smoothed by being turned in the lathe (for the lathe marks are always visible) while yet in a soft state, and before it was removed from the mould, thus preventing any injury which might otherwise happen to the ornamental vase by handling. Both the mould and vase inside it were then placed in the kiln and baked; the former having been already fired, would not shrink, but act as a seggar to protect it from smoke, and regulate the heat, the latter would necessarily shrink during the baking, and be easily removed when finished. The moulds would then be kept for future use."

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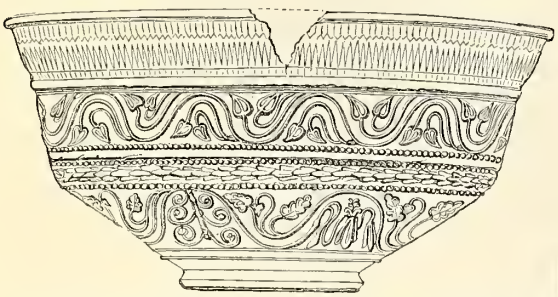
* *Marks and Monograms on Pottery and Porcelain*, with Historical Notices of each Manufactory, preceded by an Introductory Essay on the Vasa Fictilia of England, and followed by a copious Index. By W. CHAFFERS, F.S.A. Second edition, considerably enlarged. (London: John Davy & Sons.)

* Marryat's "Pottery and Porcelain Glossary of Terms," —Samian Ware.

Of this Samian ware only vases, dishes, and plates have been found in England, but no regular drinking-cups. An example of an amphora is given, found at Cologne. We present the copy of an illustration



of a very fine bowl (alas! only a fragment) of this ware, which was discovered in 1845, in St. Martin's-le-Grand. The original may be seen by any one who takes the trouble—which will be well rewarded—of a visit to the Museum of Practical Geology, in Jermyn Street. The inscription OF. VITAL. (*Officinâ Vitalis*, from the workshop of Vitalis) is impressed inside it.

ARETINE ware, fabricated at Aretium (Arezzo), in Etruria, is distinguished from Samian—of which, in its larger meaning, it may be perhaps considered a variety, though Mr. Chaffers holds it as distinct—by the darker red of its colour, and the higher finish of its work, and by the potter's name being generally impressed on a "foot print," or on the outside of the vessel.

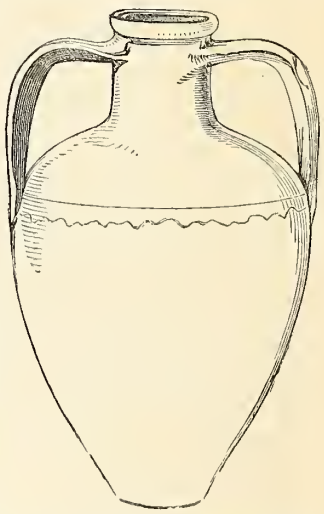
The great authority on this fabric is Dr. Fabroni, whose book, mentioned above, is referred to by Mr. Chaffers. Only two specimens, one of them found in London in 1841, are given, and we are left with very scanty information in regard to this ware.

Of Roman ware produced in England, some of blue-black colour has been found in the remains of a very extensive pottery along the banks of the Medway, near the village of Upchurch. A vase, probably of this manufacture, was dug up in Cheapside in 1850.

The CASTOR ware, made at Castor, in Northamptonshire, where are extensive remains of kilns, was of a more ornate kind; the vessels and fabrication of this ware—specimens of which have been found in various parts as well as near Castor—are thus described by Mr. Chaffers:—

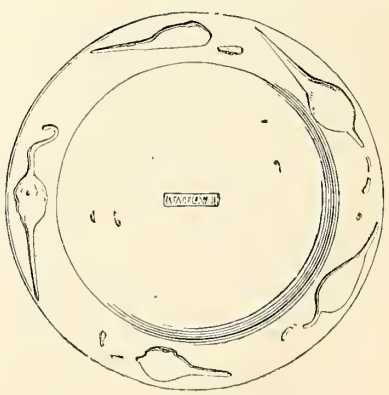
"These vessels are ornamented in relief with hunting subjects, representations of fishes, scrolls, foliage, and human figures; the mode of operation seems to have been by means of sharp and blunt skewer implements, and a *slip* of suitable consistency. These implements were of two kinds, one thick enough to carry sufficient *slip* for the head, neck, and body of animals, and another small enough to delineate the details, as the tongue, eye, lower jaw, legs, and tail. There appears to have been no retouching after the *slip* trailed from the implement. These vessels were glazed after the figures were laid on, which are usually of a different colour to the body of the ware, as white on a light brown or chocolate ground. Fig. 16 [of which we give a copy] is a poculum of the Castor ware of white paste, dark brown glaze, with a metalloid lustre, representing hounds hunting a stag, laid on in *slip* after the vase was turned, and then glazed; a sort of engine-turned tool work is seen at the bottom. Height, 4½ inches; found in Cateaton Street, January, 1845."

This is also, as we learn from Marryatt's book, where the same plate is given, to be seen in the Museum of Geology, and, from Mr. Chaffers's description, it must be an exquisite work. The remains of this ware are chiefly drinking-cups, some of them, like the example quoted above, attaining elegance and luxury in design and ornament. The form of some of the amphoræ found in London of plain, we presume Samian, ware, is elegant in its simplicity—*simplex munditiis*—if the hackneyed Horatian expression may be excused. We extract one from p. 23, fig. 30.



Of tiles, cinerary urns, and lamps, but few examples are given; in regard to the last, owing, Mr. Chaffers says, to their being, with few exceptions, of a rude character. We pass over them, and the former also, as presenting no features remarkable in art, only mentioning a good specimen of a terra-cotta lamp, which was found at Cologne, and can scarcely, therefore, come under the head of *Vasa fictilia* of England. Of figures in terra-cotta, two are mentioned, but they are not very remarkable or valuable.

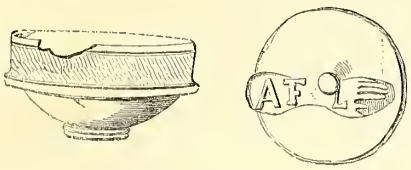
The marks on the Roman and Romano-British pottery consist generally of the plain name of the



potter, and frequently contracted. In Samian ware it is impressed in the centre of the dish, as in the figure of a patera, manufactured by one Ursulus,

Occasionally, however, the name is outside the vessel.

The Aretine ware, as we have said, is generally marked on a sort of foot, as below :—



The real value of all specimens of ancient pottery, or of glass or metal ware, is of various kinds, arising, first, from their *intrinsic beauty, i.e.*, as works of art ; for in the oft-quoted line of Keats,

"A thing of beauty is a joy for ever ;"

or, secondly, from their *historic interest*, affording illustrations of the manners and customs of those who used them, and from their form and composition, attesting (in combination with previously ascertained data) to the period of historic facts ; or, thirdly, from what may be called by way of distinction, their *antiquarian* value, namely, that value which alone they often acquire in the eyes of collectors as pieces of curiosity, for their rarity, age, and perhaps, too, for their hideousness. The first two kinds of value are rational and elevating ; as to the last, it must be confessed that, save where connected with one or other of the former, it is useless and contemptible, serviceable only to the pockets of curiosity-dealers, and exhibitors of the type of Barnum and Artemus Ward. Now, the *Vasa fictilia* of the first part of Mr. Chaffers's essay —which might be perhaps more fitly called an illustrated catalogue *raisonnée* of articles of antiquity of this kind which have fallen under the writer's own observation—do not, interesting as they are, afford more than a slight insight into Roman life in Britain, and prove rather the absence or poverty of native fictile ware at the period, than exhibit the abundant luxury of the articles of domestic life among the Roman colonists. Without indulging in the excesses of the vicious capital of the Empire, it cannot be doubted that the tables of some of the richer settlers, or even natives, and of the Roman prefects and generals, were furnished with vases, goblets, and cups of Greek and Etruscan fabric, as well as of silver and gold, of far greater beauty than any here mentioned, ornamented probably, with bacchanalian and amorous subjects, social and mythological. A picture of such a composition is imagined and described in the exquisitely classic and elegant drinking-song by the Earl of Rochester.

"Vulcan, contrive me such a cup
As Nestor used of old ;
Show all thy skill to trim it up,
Damask it round with gold.

"Make it so large, that filled with sack
Up to the swelling brim,
Vast toasts, in the delicious lake,
Like ships at sea may swim.

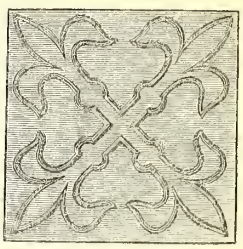
"Engrave not battle on his cheek,
With war I've nought to do ;
I'm none of those that took Maestrich,
Nor Yarmouth Leaguer knew.

"Let it no name of planets tell—
Fix'd stars or constellations ;
For I am no Sir Sydrophel,
Nor none of his relations.

"But carve thereon a spreading vine,
Then add two lovely boys ;
Their limbs in am'rous folds entwine,
The type of future joys.

"Cupid and Bacchus my saints are—
May drink and love still reign !
With wine I wash away my care,
And then to love again."

The second part of the essay, containing an account—with various apposite and interesting literary illustrations, quotations, and allusions—of mediæval pottery in England, appears to us more complete than the former part, though still partaking of the fragmentary character, unavoidable, perhaps, in an attempt to compress so extensive a subject into so small a compass. The specimens which have been found of earthenware dating from the seventh to the fifteenth century, owe their value almost exclusively to their historical and antiquarian interest ; for, as Mr. Chaffers notices, "for elegance of form, or fineness of material, they present a lamentable decline from the Greek and Roman periods."



From this remark, an exception should be made in favour of *tiles*, of which there exist examples superior to any of Roman fabrication. In this country a special perfection had been attained in the thirteenth century, and Mr. Marryat observes—

"The tiles discovered in England are generally of better make and more elaborate execution than those of the Continent, and were no doubt of native workmanship."

In Greek and Roman art, the grotesque was comparatively rare, and when introduced, was generally combined with a certain grace ; whereas, in the productions of the Middle Ages it is predominant. This grotesqueness is particularly noticeable in mediæval earthenware jugs, and it forms one of their chief points of interest. Some of the vessels—especially drinking-vessels—of the sixteenth and seventeenth centuries, were made vehicles of satire, and with their design are connected curious and amusing allusions to the political and religious feelings, and illustrations of expressions and passages in the literature of the period. An example of this is found in the "Bellarmine"—so-called as a mark of Protestant disrespect to the great controversial cardinal, the champion of Romish politico-religious doctrine. This jug was "introduced from Holland," and "was in general use in the sixteenth century at public-houses and inns." It is one of the family of *grey beards ;* and, according to Marryat, "received its name in the reign of James I., in derision of Bellarmine, and in compliment to the king, who had recently issued a rejoinder to Bellarmine's celebrated letter *De Potestate Summi Pontificis in rebus temporalibus*, in which he sought to detach

the English Roman Catholics from their oath of allegiance."

The following lines, quoted by Mr. Chaffers, from "The Ordinary" (act iii., sc. 3), show that the warning designation of "Conscience," was also applied in Ben Jonson's time to these bearded jugs.

"Thou thing,
Thy belly looks like to some strutting hill,
O'ershadowed with thy rough beard, like a wood,
Or, like a larger jug, that some men eall
A *Bellarmine*, but we a *Conscience*,
Whereon the lewder hand of Pagan workman
Over the proud ambitious head hath carved
An idol large, with beard Episeopal,
Makiug the vessel look like tyrant Eglon."

The specimen which we reproduce, was found on the site of the Old Boar's Head in Eastcheap, which gives it additional interest, and one cannot but wish that the excavators had been fortunate enough to discover a specimen of the cups, of whatever material, from which, according to Shakespeare, Jack Falstaff quaffed his sack a century earlier. There is a humorous old song of note, familiar, perhaps, to many of our readers, which from its kindred, though more poetic fancy, and its quaint, however remote, connection with our subject, we are here tempted to quote. Its title is "The Brown Jug," imitated from the Latin of Hieronymus Amaltheus, by the Rev. Francis Fawkes, a learned and sociably-disposed ecclesiastic and friend of Johnson and Wharton, who lived between 1721 and 1777.

"Dear Tom, this brown jug, whieh now foams with mild alo
(In which I will drink to sweet Nan of the vale),
Was once Toby Fillpot, a thirsty old soul
As e'er drank a bottle, or fathomed a bowl;
In boosing about, 'twas his praise to excel,
And among jolly topers he bore off the bell.

"It ehanced, as in dog-days, he sat at his ease,
In his flower-woven arbour, as gay as you please,
With a friend and a pipe, puffing sorrows away,
And with honest old stingo was soaking his elay;
His breath-doors of life on a sudden were shut,
And he died full as big as a Dorchester butt.

"His hody, when long in the ground it had lain,
And time into clay had resolved it again,
A potter found out in its covert so snug,
And with part of fat Toby he form'd this brown jug,
Now saered to friendship, and mirth and mild ale;
So here's to my lovely sweet Nan of the vale."

Earlier mention should have been made of Saxon pottery, of which a short summary is given, but there seems but littlc to be said on it, beyond that "it is generally rude, whilst the glass is elegant," a fact most curious, and well deserving attention, investigation, and explanation.

For a considerable period earthenware appears to have been held in rather low esteem, and to have fallen into disuse. But few vessels were manufactured in England, and those generally of a coarse kind; all of the better sort came from abroad, and a lucrative monoply existed in the trade by Royal grants. One vessel, however—but whether of English or foreign fabric is uncertain—the "Crusekyn," is mentioned in an inventory of Edward II. (1324), and was mounted in silver. The word is still in use in Ireland, and is familiar to all who remember the long famous and favourite song "The Cruiskeen Lawn," recently made more popular among Londoners in the exciting drama of "The Colleen Bawn." By degrees, enterprise discovered afresh what the Romans, as we have seen, found out centuries before, that capabilities existed for a home manufacture; and in 1626 permission was granted by Royal Letters Patent to two persons, probably, it has been suggested, foreigners by birth, to carry it on. The document is, we think, of sufficient interest and value to be extracted in spite of its length.

"Whereas, we have been given to understand by our loving subjects Thomas Rous, or Ruis, and Ahraham Cullyn, of the City of London, merchants, that heretofore and at this present, this our kingdom of Englaud, and other our dominions, are, and have been served with stone pottes, stone jugges, and stone bottells out of foreign partes, from beyond the seas, and they havo likewise shewed unto us that hy their industry and charge, not only the materials but also the art and manufacture may be found out and performed, never formerly used within this our kingdom of England hy any, which profitable invention they have already attempted and in some good measure proceeded in, and hope to perfeet; hy which many poore and unprofitable people may he sett on work and put to labour and good employment. We therefore grant our Royal privilege for the *sole* making of the stone pottes, stone jugges, and stone bottells, for the term of fourteen years, for a reward for their inveneion, and they have voluntarily offered unto us for the same a yearly rent of five pounds towards our revenue, soe long as they have benefitte by this our grant, neyther do they desire by virtue of sueh grant to hinder the importaeion of these commodities by others from foreign parts."

It may be presumed that it was after one of these grantees—conjectured to have been a native of Cologne—that the name of "culling" was given to the jugs manufactured by them. "These vessels were of a sort of mottled grey or brown, and their necks were plain, and not bearded as the Bellarmines;" but, like them, they were unglazed. Two more vessels must be mentioned, the "Costril" and the "Tyg," both of coloured glazed ware. The former was pierced for a cord, so that it might be carried on the person like the wooden barrel carried by labourers, for which the same name is still in use.* The latter, of which the name (of Saxon origin) still survives in Staffordshire, is more remarkable.

* Marryat's History, p. 140.

"It was made of coarse earthenware, with chocolate-coloured glaze, sometimes decorated with buff-coloured ornaments," and having two or three handles, was used as a parting or loving cup, being passed on from guest to guest.

With what success materials have, since the time of Messrs. Rous and Cullyn, been sought for in England, and the variety of skill employed in their application, will best appear by a final quotation from the closing passages of the essay, with which we will also conclude this notice. They are well calculated to excite an interest and curiosity in the subject, and thus form a good introduction to the rest and main part of Mr. Chaffers's work, namely, his "Catalogue of Marks and Monograms."

"At the present day, to produce the commonest painted bowl used by the poorest peasant wife to contain the breakfast of her rustic husband, the clays of Dorset and Devonshire, the flints of Kent, the granite of Cornwall, the lead of Montgomery, the manganese of Warwickshire, and the soda of Cheshire, must be conveyed from these respective districts, and by ingenious processes, the result of unnumbered experiments, be made to combine with other substances, apparently as heterogeneous, obtained from other nations."—Shaw.

"A single piece of ware, such as a common enamelled teapot, mug, jug, &c., passes through at least fourteen different hands before it is finished, viz.:—the slipmaker, who makes the clay; the temperer or beater of the clay; the thrower, who forms the ware; the ball maker and carrier; the attendant upon the drying of it; the turner, who does away its roughness; the spout maker; the handler, who puts on the handle and spout; the first, or biscuit fireman; the person who immerses or dips it into the lead fluid; the second, or gloss fireman; the dresser, or sorter in the warehouse; the enameller, or painter; the muffle, or enamel fireman. Several more are required to the completion of each piece of ware, but are in inferior capacities, such as the turner of the wheel, turner of the lathe, &c."

On parting here from the author—not without an idea of some day returning to the subject—we may take the opportunity of remarking that his present edition contains a mass of new and important matter; is elegantly, nay, luxuriantly, produced; and has the great advantage over its predecessor of a careful index.

SPROUTING PLATES AND JARS.

By George Chapman, F.S.A.

THE drawings accompanying this article represent an exceedingly rare phenomenon occurring in Porcelain, a phenomenon so rare, indeed, that the present writer after careful inquiry and researches has heard of but two other instances. If, however, any of the numerous readers of Nature and Art have met with any other examples, the information will be gladly received through the Editor.

Let them only be so fortunate as to escape fractures, and one is inclined to suppose that the cherished *bits* of "Old China" that ornament our drawing-rooms are among the most unchangeable of one's possessions. Of the two improbabilities one would, perhaps, rather expect to hear that one's mahogany chairs were shooting into leaf, than that one's china tea-pot was growing, and yet we have three instances of the latter occurrence, and none of the former.

The jar under consideration which, though it resembles a tea-pot was probably not intended for such a purpose, is of oriental manufacture, though it has been thought that possibly some additional colouring and gilding has been added and burnt in in this country—a not uncommon circumstance.—It is of rather coarse substance covered with a hard glaze; its age may be from a hundred to a hundred and fifty years. It has been for many years in the possession of a relative of the writer, resident in London. About a year ago it was observed that the enamel was rising in lumps on the outside, and on examination it appeared also in the inside of the vessel. This process went steadily on till patches of the enamel, in size from a fourpenny-piece to a shilling piece, have risen in several places from the substance of the china on white crystalline, bases to the height of nearly a quarter of an inch, and in other parts a lesser disturbance has taken place: but as the movement is still continuing, the shoots may possibly all attain the same altitude. Such is the strange behaviour on the part of a tea-pot which had borne for so long, a quiet and respectable character.

We will shortly refer to the other instances on record of this strange freak that porcelain nature is liable to, and then state what is probably the scientific explanation.

In the "Recreative Science" magazine for January, 1860, the Editor tells us that, attracted by a handbill announcing the "startling fact" of an old china plate covered with "a natural growth of trees, shrubs, and flowers" to be seen at No. 2, William-street, Shoreditch, he attended the exhibition, and, for the outlay of 6d., saw the wonder which he thus describes: "It is simply a case of efflorescence, and the crystals formed by some slow decomposition taking place in the clay, force themselves through the enamel, and in some instances rise to a height of half an inch, in tufts and bundles. In several places portions of the enamel are lifted up by the crystalline growth and appear like lozenges laid on the flat surface."

The other example was announced by the following amusing advertisement:—

"THE GROWING PLATE."

"Go and see Mr. H. Healey's growing plate. The most wonderful natural phenomenon of the age. The surface of an old china dinner plate, which has been in the possession

of Mr. Healey's family nearly 300 years, during which long period it has escaped accidents of time, is now covered with eruptions of the purest crystal, resembling palaces, shrubs, flowers, &c., &c., of the most exquisite beauty. On the 8th of August, 1859, it was removed from the cupboard for ordinary purposes, when it was found to be covered with small eruptions, which created much surprise, and being preserved, has continued to develop its wonderful natural curiosities to the present time. The attention of antiquarians and men of science is expressly invited. Now on view, 147, Oxford Street."

Among those who visited this plate was Mr. Frank Buckland, who thus describes it in the second volume of his third series of "Curiosities of Natural History":—

"At first sight one would imagine that bits of common washing-soda had been scattered over the plate, and attached to it by gum; but, on close examination with a magnifying glass, I observed numerous excrescences of a whitish opaque substance, apparently growing or extending themselves out of the centre and rim of the plate. The largest eruption (if it may be so called) is about the size of a fourpenny-bit, and it has raised up a portion of enamel above the surface of the plate to about the height represented by the thickness of a new penny-piece. In another place is seen a portion of enamel, also of an oblong shape, just being raised up above its ordinary level by the substance which is coming up from below.

"Numerous minor eruptions are also seen in the plate, all presenting the same appearance, viz., that of some substance taking its origin from the interspace between the upper and lower surfaces of the plate, each raising with it a portion of enamel corresponding in size to the extruding material. I have not the least doubt that this is a natural production; that the material is of a mineral parasitic growth, resulting from some chemical decomposition of the clay of which the plate was originally formed.

"The proprietor told me that he had refused a cheque for a thousand pounds for his specimen. I therefore advise my readers to look in their china-closets, and see if any of their plates have grown since they were deposited there."

It only remains that we should state the probable explanation of this singular phenomenon.

A complete analysis of the crystalline substance which has forced up the enamel, is not possible without injuring a very interesting specimen. A minute portion, however, which was removed from one of the protuberances appears on examination to be chiefly, if not wholly sulphate of soda. The question now arises, how did the sulphate of soda get there, and what induced it to sprout up, forcing up the enamel in the way above mentioned.

The following is offered as a probable explanation:—

Carbonate of soda was used in the enamel as a flux, the soda forming a glass with the silicic acid or silica. The quantities not having been accurately proportioned (the carbonate of soda being most likely in excess), a slow decomposition (not necessarily on the surface) has been going on for a long time. There is hardly a mediæval window where such a decomposition may not be observed.

The atmosphere of all large towns, London especially, contains suphuric acid, the result of the combustion of sulphur in the coal.

The acid has by slow degrees combined with the soda and formed sulphate of soda, the moisture of the air supplying the water of crystallization.

Every equivalent of sulphate of soda takes ten equivalents, or more than half its weight, of water of crystallization; the increase therefore in the bulk of the salt on crystallizing is very considerable, and hence the sprouting.

The length of time occupied by this change may be a puzzle to some, but the phenomenon will appear in reality to have taken place with great rapidity, if we compare it with the time which must necessarily have elapsed in the chemical changes in the crust of the earth that geology has brought to light. When, by the decomposition and the action of sulphuric acid and moisture in the air, the sulphate of soda had been formed, the crystallization and consequent sprouting would be comparatively rapid.

AN INCIDENT IN THE PACIFIC.

By P. Aris Eagle.

PROBABLY in no part of the world are there such a number of beautiful scenes as there are in the various Groups which dot the Pacific from the Bay of Islands to the Equator. Of these, none are more diversified and interesting than the cluster which comprise the Solomon group. The islands display everywhere the richest vegetation and colouring; their rocky shores being often clothed to the water's edge with tropical plants and shrubs, which dip their graceful stems into the sea. Deep glens, often enamelled with flowers of the brightest hue, revealing here and there the luxuriant foliage of the pandanus-tree, are relieved again by groves of pine or sandal-wood, which extend to the foot of the hills, and are intersected with rivers and streamlets, whose glittering courses are traceable until they finally mingle their waters with the ocean. The landscape is crowned by distant mountains covered with the rich verdure of the tropics, producing a scene that, for beauty and picturesque effect, may vie with any in the world.

On a cruise round the northern island during the summer before last, in one of the numerous vessels engaged in the sandal-wood trade that leave the port of Sydney, we found ourselves early one morning, under the shadow of a high mountain. The sun was flushing a strange orange tint in the east; the orange deepened into purple, and spread into broad flakes over half the sky; and, like magic, it was daylight. Watching the varying effects of sunrise, we curiously directed our attention to the mount which towered above us like a gigantic cone.

Another moment and the light had struck upon its summit, and it brightened instantly, looking like a huge golden wedge, piercing the heavens. The island could not be more than twelve or fifteen miles in circumference, and the peak was fully 7,000 feet above the sea level. It rose almost perpendicularly, and the small ridges, or hollows on its face, were filled with richly coloured foliage. The sea broke on rocks that looked like black pieces of marble, strewn in all directions along the shore.

We now noticed that a thin haze of blue vapour hung in a fantastic shape above the space between the crags that formed the peaks of the island, and it then occurred to us that it was a volcano, and still active. This impression was strengthened upon a closer observation, and it was determined by the captain (who was an American), and myself, to ascend the hill, and examine the crater. Choosing four men from among a number of volunteers, including a negro, known as "Sal," and loading them with food and other requisites, we started on our expedition, about nine o'clock in the morning. The boat went merrily through the blue water, which was here as transparent as glass, showing deep below us the little coral insects at work, rearing a wall, which now shone with every colour of the rainbow, and was twisted into every beautiful or fantastic shape imaginable. Out and in amongst the purple and green coral stems, fish of the most intense blue dashed rapidly, or nibbled at the soft shoots, as they seemed, of the coral plants. The sky was a cloudless sapphire in colour, and the great sun seemed to swelter in the intensity of his own light and heat.

Above us towered the mountain, its jagged peaks standing out, sharp cut, in splendid relief against the background of sky; while over it, like something uncarthly and weird, hung the large vapour-cloud, which changed shape every few moments, but—as it were some ghostly warden of the volcano's mouth—never left its station. In about ten minutes from leaving the ship's side, we reached the shore. Its formation seemed to be of rock, yet scarcely anywhere was this visible for the creeping plants that stretched their long tendrils in every conceivable direction. Our progress, indeed, was slow, and difficult from the first, owing to this tangled growth, which often twined round our feet as we went, and not seldom threw one or other of us down. After about an hour's travelling, the ground changed in character; the sharp stones giving place to red burnt ashes, which rendered ascent a matter of difficulty, as we often sank in them nearly to the ankle. We had journeyed for about three hours, when two of our party gave in, and positively refused to go any further. Shifting a portion of their load to ourselves, we left them free to return, and resumed our journey after a few minutes' rest. Halting for refreshment about noon, we sat down upon the steep slope, and leisurely surveyed our situation. The scene below us was exceedingly beautiful. At our very feet, as it seemed, lay the sea, glittering like gold, and wrinkled all over with ripples, that looked in the distance like the fretted work of jewellers. The vessel lay a little way off shore, her sails appearing like snow-flakes, and the men on her deck like small black insects. Our late companions had already reached the foot of the hill, which we had ascended so laboriously.

While seated, we experienced a very distinct shock of an earthquake, and I felt the strongest possible hope of seeing something more striking than an almost extinct volcano. As we ascended, the shocks became more frequent, although not severe. They were sufficient, however, to terrify the remaining white follower of ours: he refused to proceed at last. The negro, "Sal," who was rapidly becoming of a dirty grey colour, rather than his natural ebony, declined to go back with him, preferring our company, even in danger, to that of our late companion, whom he looked upon with much contempt as a deserter. After another short rest we again proceeded on our journey, but in spite of our utmost efforts, the sun was getting low in the west, when we stood upon the brink of the great crater of Tama-Tavoo. The scene which broke upon us as we reached the top was strikingly grand, yet terrible. The whole mountain seemed a mere hollow shell in its upper part; so hollow, indeed, that it was matter of surprise that these two sharp, jagged peaks, one on each side of us, could have remained upright so long. The inside of the crater was in shadow, and the clouds of sulphurous steam that hung about its sides in lazy wreaths, very much impeded our view of the bottom. We could see it, however, probably not more than 1,000 feet below us.

Startled as I was at the first sight of the crater in its far from extinct condition, I had scarcely glanced round me, when I conceived a strong desire to penetrate its lower depths. My companion was eager for the adventure. With "Sal," however, it was very different. He expostulated in the strongest and most incoherent language against such an attempt as descending into what he forcibly designated as being "berry like um hell."

Having deposited the food and other things we carried, I took up the track of the captain, who had already got some way down the slope, and was shouting to me to follow, as he "guessed it war a darned rum location."

The scene revealed to us when we had got about half-way down, was well calculated to impress one with awe and wonder, and exceeded all that my imagination had formed of it. The setting sun being partially intercepted by the taller of the two peaks, a deep shadow was thrown right across the huge gulph that lay between them. Far above, a white cloudlet floated, fringed with purple light, and distinctly visible from below. The eastern peak of the mountain formed of basalt, black as jet, and jagged and broken into a thousand fantastic forms, seemed set in burnished gold. Lower down, the white sulphurous vapour hung fleecy and heavy in the clefts of the rock, while little jets of steam burst forth here and there with strange, intermittent puffs. The bottom, which appeared not more than 500 feet below us, presented an unearthly aspect.

It seemed to be floored with stone, or rather with something like an asphalt pavement; while, distributed about, were a number of little hills, black in colour, and of the shape and appearance of a sugar-loaf, but invariably puffing jets of steam, like those from an engine, and often with as shrill a noise. Every few seconds there came the shock of an earthquake, more or less violent.

The captain, who had nearly reached the bottom, stopped occasionally to urge me to follow him faster. I could see him put his hand up to his mouth to shout, but his voice was drowned amid the rumblings which appeared to issue from every side.

"Sal" was a long way above me, apparently making his way down the slope, but very slowly indeed. Hastening after my companion, I managed to descend pretty safely, and escaped with a few trifling bruises. Breathless, at last I reached the bottom, and stood, as it appeared, on the shore of a lake of asphalt, that had been suddenly petrified, with its ripples all in motion. It was a marvellous sight, and I confess to a sensation almost of terror as I glanced around me, and felt, rather than saw, how large a share of the light which showed me the place, came from below me, rather than from above. It was not difficult to discover whence this illumination proceeded. Close to me, at a distance of not a dozen yards, there was a great crack, with a chasm of about two feet in width, from which steamed up a lurid whitish vapour, and the reflected light showed plainly enough that below was molten lava.

Seeing that my companion had gone across to what seemed to be the most active side of the volcano, I set out to follow him. The rock was so hot that it burned through my boots as I walked, and every moment my ear was startled by a report, varying in loudness from that of a pistol to that of a cannon. I had to leap from one huge piece of paving, so to speak, to another, across a gap that glowed a dull sullen red at the bottom, and emitted vapour which made the eyes water. Still I pressed on, but slowly now, for the frequency of the explosions on every side had in them something appalling. I looked up overhead, the sunlight had faded from the peak, and the sky had a grey, cold look, which betokened the rapid coming on of night. There was no want of light where I stood, however but it was dull, red, and smoky, like the light from a huge smelting furnace, thrown out on a dark night. I could just make out my companion, as he appeared a long way in front of me; his figure looked of an unearthly size, and as if his body was transparent, and of the colour of molten iron. Just then came a terrific crash and a roar, and a huge block of stone, at a red heat, fell within a couple of yards of where I stood. I saw the captain stop and look back, as if irresolute what to do. I knew that I could not possibly make myself heard, but yet, by an unreasoning sort of instinct, I put my hand to my mouth, and shouted to him with all my strength, to come back, for his life! With a dull, heavy rumble, and a heaving of the ground, which almost threw me down, a sort of shudder seemed to pass over the part of the place on which I stood, and just behind me there gaped a rent in the rock of about four feet in width, out of which there burst, with a shrill scream, a column of white steam, and the red lava boiled up to the very brink, as if it would overflow. I shouted with terror. My only way of escape seemed barred by this phlegethon, that hissed and bubbled, and leaped in little wavelets, as if rejoicing at my coming destruction. I forgot everything but the instinct of self-preservation. I turned, and planting my pole as securely as I could in a crevice of the rock, where I could see that it smoked, and began to redden preparatory to bursting into flame, I ventured on the leap. Providentially I reached the other side, but so close to it did I alight, that as the lava boiled up, a particle dropped on my trousers, and inflicted a most acute pain. I never once thought of the captain. The roar, and hiss, and howl of the terrible element behind me made me run for my life, and I fled in horror even from things that I had faced without shrinking, half an hour before.

I cannot even now guess how I managed to get over some of the cracks that gaped, and bubbled up floods of spluttering, foaming, red-hot lava; or how none of the showers of stone and cinders struck me. At last I had got away from that awful lake, and had climbed, in my terror, perhaps a hundred feet up the steep side of the crater. Here I was forced to pause from absolute exhaustion. Suddenly, and for the first time since the panic seized me, the thought of my companion flashed across my mind. With a shudder, I looked below me into the lurid atmosphere—painful for the sight to dwell upon for many seconds. He was there. I could make out his active, tall figure, now looking gigantic in that extraordinary atmosphere, as it came towards me. I watched it with my breath suspended, and my aching eyes starting from their sockets. I have read of the awful sights and sounds seen and heard by Aretic voyagers when the ice floes break up; but I never read of, or conceived anything like that I now gazed upon. The noise was deafening. The floe of lava was parting each moment with a crack like a thousand cannons' roar. Huge columns of steam burst momentarily forth from some spot where an instant previously you would have sworn there was a solid rock, and with a yell that seemed to crack the drum of the ear, would rush up into the murky air above, and hang in a grey cloud overhead. The whole plain of lava which I had just left, seemed moving. Like blocks of ice on a great river, the huge pieces of crust rock that covered the molten sea below, heaved and crunched up against one another, and broke with the most awful crashing noise conceivable.

I saw all this, yet I never took my eyes off my companion, the captain. Nearer and nearer he came. From floe to floe he seemed to leap, as if by magic—the magic of despair, I suppose. "He'll reach it! he'll reach it!" I shouted wildly, as I saw him within a hundred feet of the edge, and in comparative safety. As I spoke, I was deafened by a roar, louder by far than I had heard before, followed

by a rushing sound, which seemed to advance towards me, from the opposite side of the crater. As if held by a fascination, I could not take my eyes off my companion. He heard that sound, too, for he gave a start, and bounded forward towards the brink. The rushing sound came on like a whirlwind. I looked up, and there, right across the whole width of the crater, hurried a dense white cloud, through which fiery coruscations gleamed and flashed with an intense red light.

On, on it came! I gazed at it in stupid terror. My eyes followed it as it advanced, and then caught sight once more of the figure of my companion. He had *not* reached the shore. I saw him raise his pole, and plant it upon what seemed a perfectly hard place. He leant upon it to leap, and the place on which it rested went down! I shrieked in horror, but the same instant the woolly-looking white cloud passed over the spot, and flashing forth its red lightnings, rushed towards where I cowered, trembling. I turned, and sprang up the steep ascent. From crag to crag I sprang, heedless of the fact that my boots were torn, and my feet and hands bleeding and cut in a dozen places, so entirely had the idea of escaping with life absorbed every faculty into itself. Presently, the cloud overtook me. I gasped as the thick vapour took my breath, but I did not give in. On, on I sprang, totally unable to guess what was before me, but certain that death lay behind. I could see nothing more than a couple of feet from me now, and only that by a tension of my powers of vision, which I could not have endured for a minute at any other time. The volcano I knew was busy! I could hear the sharp rattle of huge pieces of stone thrown up, and bounding down the steep side of the crater. Still I struggled on; struggled not merely as a man struggles for life, but as a man struggles to escape a horror worse than death.

At last! It was the cool wind from the sea that sent that thrill through every nerve and muscle of my body! I knew that I had got out of the crater; I could, however, see nothing yet. The white cloud was round, and all over me as before, and I had to grope round in the horrible darkness. Still, I felt that I was in a place of comparative safety, and that feeling unnerved my limbs and unstrung my muscles. I sank upon the ground in utter exhaustion! I must have been some time insensible, for I seemed suddenly to awake with a start, at a sound more appalling than any I had yet heard. I leapt to my feet with terror! At that moment, the wind came with a strong puff, and that fleecy cloud, which glowed now with an unutterable light, rolled up in heavy folds before it, and split asunder right overhead.

It was like a dream. The calm, broad moon was floating right above me in an ocean of blue sky. That flood of pure silvery light which penetrated through the red glare round me, seemed to still my pulse as if by magic. I scarcely thought whether there was a chance of life or not, my sole feeling seemed one of awe, and of a strange kind of rest, mingled in some inexplicable way with a strong curiosity to see more. I could have prayed at the moment for a gale of wind; and it came without my prayer. Suddenly, the wreaths of mist grew agitated, and swayed from side to side in wild commotion; then gathered up their huge white billows, and passed away before the gale.

The volcano was in full and awful eruption! Right before me was the great crater, no longer a black, smoky abyss, but now a boiling sea of red-hot seething lava. It leaped and waved, and hissed with a sound like a myriad of snakes, while its awful waves lapped up higher and higher every moment on the sides of the crater. It would be impossible to give an idea of its colour. Now it was red, like the sky after a stormy sunset; now the colour of blood, so like it, that I shuddered again; then again of a purple tint, and almost verging upon blue, while over it in all directions floated hazy vapours of every conceivable tinge of colour, throwing ghastly shades upon everything within reach of their colouring powers. I saw now what the noise had been. The whole of the western peak of Tama-Tavoo had disappeared—slipped, I did not doubt—into the boiling lake below it. As I looked where it had been, a thought thrilled through me like a fear once more. It was caused by a hope!

I stood upon, as nearly as possible, the very spot at which I had begun my awful descent into the crater. Formerly, there had arisen on each side a craggy peak; now there was but one peak. Before me, the burning, boiling lake of fiery waves was surging and seething up towards me, foot by foot, inch by inch! The hope was, that it might overflow the crater, before it rose to the spot where I stood. It was but one shudder, and I was calm again. Calm enough—strange and unnatural as it may appear—to observe the forms of some of the rocks at my feet, and to speculate upon the question how soon each little point would be covered by the advancing tide. It was curious how many things I seemed to see at once. I was conscious of the moon floating undisturbed overhead; I knew how beautifully the sea shone far below under its soft rays; I could even observe and wonder at the curious forms which the fiery waves of lava assumed, as they lapped up and up along the brink of the crater. The only thing I could hear was the vast hissing noise, to which I have before referred, and which had either drowned every other, or had affected my sense of hearing, so that I could perceive nothing else. On it came! never stopping, never ceasing for an instant, that same awful monotonous sound. I shrank from it, and though with both hands I screened my face from the intolerable heat and light, I was too paralyzed in body and mind to move, until a yet mightier sound, like the roar of a cataract, made me start from my lethargy. I looked, and in a moment I felt that I was saved. The lake *had* found an exit! already it had burst through the retaining brim of the crater, and was rolling a mighty, glancing, quivering river of fire down the steep hill-side.

Down! down! down! My eyes followed its course as if in a dream. Before it I could see the

matted foliage of the lowland shrivel up, and then toss its tendrils, each for a moment in what looked like agony. At last it reached the shore, and, with a plunge and roaring hiss, met the dashing waves of the sea!

* * * * *

When I returned to consciousness, and opened my eyes, the stream of golden sunlight made me close them at once. I tried to move, but I seemed to be bound hand and foot, and to feel a weary sort of lassitude. Attempting to open my eyes, a hand was laid upon them, and a voice which I knew to be that of black "Sal," said in a whisper, "You keepee your eyes shut, massa. You all right now, 'board ship. Sal bring um back from de mouth ob de bad place."

THE BAMBOO CANE.

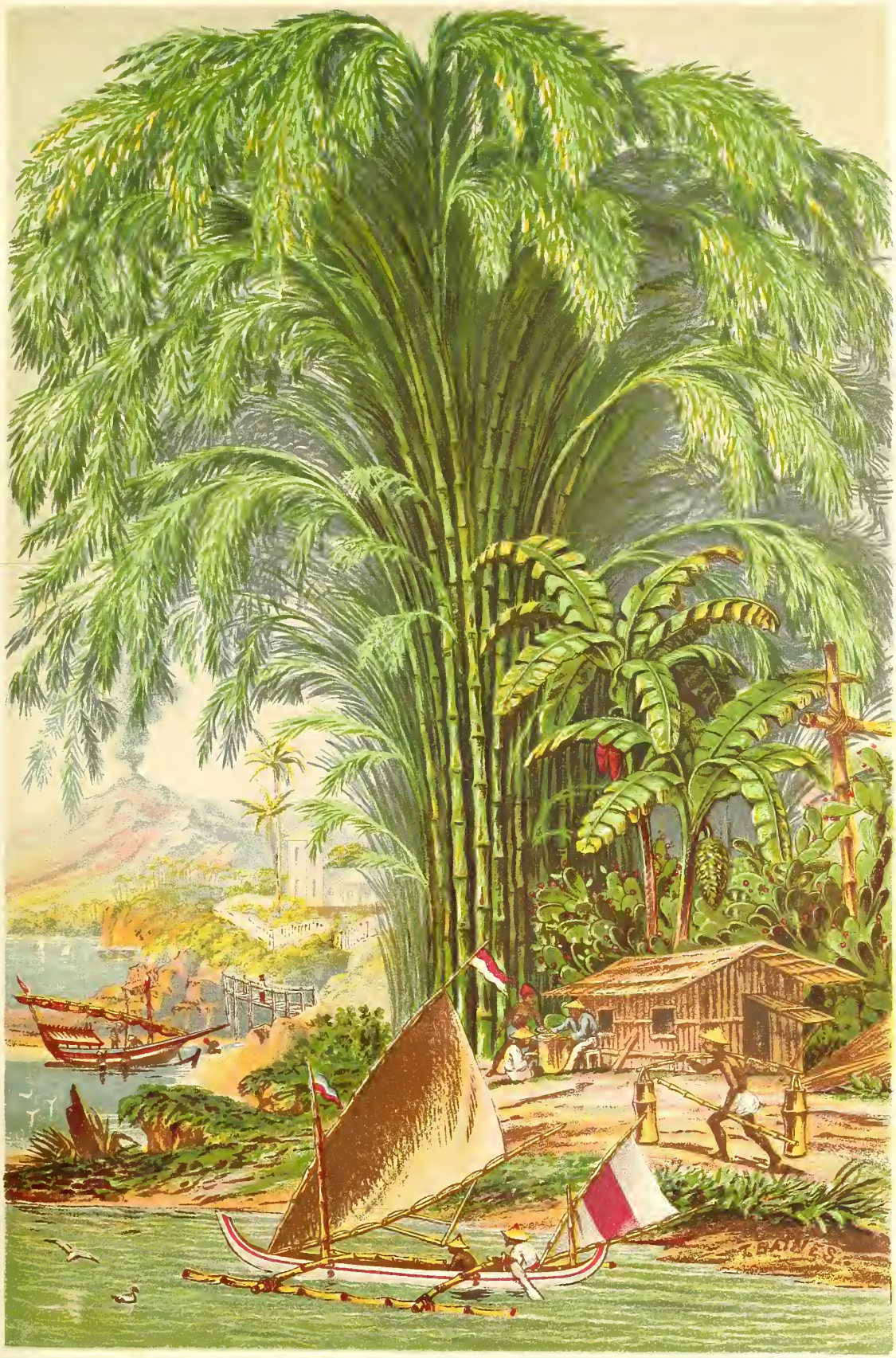
(*Bambusa arundinacea.*)

By W. B. Lord, Royal Artillery.

IT would be difficult amongst all the treasures placed at man's disposal by an all-wise Providence, to find one possessing so wide a field of usefulness as that now under consideration. As there are sermons in stones, so are there discourses most eloquent inscribed on the ridged and furrowed bark, the spotted leaf, and amongst the waving grasses and trees of the forest, the ebbing and flowing tide, the drifting "gulf-weed," and the branching coral; each tells its tale of wise provision to those who roam amongst the works of Nature, and faithfully study at her shrine. From the frost-bound North, where the pigmy Esquimaux launches his skin canoe amongst the floes of floating ice, and captures the oil-bearing seal and fish—destined to furnish light, heat, and food through the long twilight of an Arctic winter—to the prairies of the far West, where the mounted Indian hunter dashes in pursuit of the countless throngs of bison dotting the plains, Nature provides for man, as well as in other lands, where, under an ardent sun, he requires more varied material with which to supply his daily wants and necessities. Our present object is to show how amply many of the most important requirements of those resident within, and on the borders of, the Torrid Zone, are supplied by the gigantic grass, so wisely and profusely placed ready to their hands. Nothing can exceed in beauty the graceful bamboo, as its feathery foliage waves and flutters in the breeze. The colour of its long, narrow, pointed leaves is charmingly refreshing, and the shade afforded by the natural canopies often formed by it is most enjoyable. It will be observed, on examination, that the bamboos brought to this country for fishing-rods, walking-sticks, &c., are hollow, and that the hollows are divided at certain intervals by knots, or "internodes," as they are called. These are produced by bundles of sap-bearing fibres, which are thrown across each other. They, like the rest of the interior, are lined with a soft white coating. From the outside borders of these knots are produced alternate lateral buds; and from these grow the alternate branchlets, which form of arrangement gives such elegance to the full-grown cane. No plant with which we are acquainted has anything like the rapidity of growth of the bamboo; it sometimes grows as much as four inches in one day. In favourable situations it has been known to shoot up twenty feet in height, and attain a circumference of from nine to ten inches in six weeks. Many natives, experienced in matters relating to cane, assert that every bamboo reaches its full altitude in one year from the time of its springing from the ground, and that the only change it afterwards undergoes is in the deposit of woody matter in its substance. It is very doubtful, however, as to whether this is the case, as many of the "topes," or clumps of bamboo, which we have examined in Bengal, appear to be of considerable age, and of growth too irregular, even in the same clump, for all the shoots to have attained their full height at any given period, as light, space, and character of soil must all influence their development. Another notion prevails that in certain localities the cane will not bear seed until it is fifteen years old, after which it immediately dies.

Although growing wild over a vast extent of the East, the bamboo is at times carefully cultivated, and great pains are taken in its management. It is very singular, that although rich spongy soil is so congenial to its growth, continued moisture destroys it to a certainty. We had an opportunity of seeing this fully proved. A small rivulet, which had served to drain the superfluous water from a miniature lake in the woods, had been dammed back by a fallen tree; leaves, sticks, and dead water-plants had added their mass to the obstruction. The lake had to find for itself a new outlet, which it did at the head of a valley on its border, converting that which was a bamboo thicket into a swamp. Every cane was soon dead, and standing stark and withered, whilst a thousand flowering plants and trailing creepers made haste to clothe them with their leaves and blossoms. So destructive to the bamboo is a too humid soil known to be, that a wide, deep trench is cut round each plantation, in order to carry off the water.

The bamboo is propagated from young sprouts, which are placed in pits about two feet deep, prepared for them at the close of the autumn months. As the season advances, and the young plants take root and shoot up, they are cut off close to the earth, in order to impart vigour to the parent root. And now comes into operation the art of the cane


T. BAINES

cultivator, who culls, assorts, and selects the particular plants he considers best adapted to the special uses for which they are ultimately intended; those destined to ornament the garden and the pleasure-ground being turned into graceful curves, over sticks bent for the purpose; others, such as are used for fishing-rods, or the slender flag-poles of the temples, are allowed to shoot up straight to their full altitude, all the other sprouts from the roots being cut off. A very curious method is adopted when a cane of unusual size and height is required for any very special purpose.

After careful search and due investigation, a root of the most vigorous description is selected by a whole conclave of knife-bearing cane-growers, who usually have a great deal to say on the subject. This, after being carefully dug up, is planted again in a pit prepared for it, in the most favourable position to be found on the plantation. The shoot is now cut off about five or six inches from the ground, leaving a hollow tube projecting, and into this hollow of the cane is rammed a mixture of stable litter and pounded sulphur, until it is quite full. For three years, every sprout appearing above the surface is scrupulously cut off. The most vigorous and best-shaped shoot of the fourth year is alone allowed to stand, which in due time becomes a sort of Goliah amongst canes. Those which turn out either crooked or unsightly, thereby rendering them unfit for the purpose originally intended, are immediately applied to another, such as fencing in the plantation, making bridges across the drainage-ditches, props for other canes, splitting, &c.

Nothing is wasted. The young sprouts which are cut off as superfluous, are carefully preserved, and served up at table like asparagus, to which vegetable they are quite equal, if not superior, with the advantage of being in season all the year round. A little loose earth heaped up around the main root keeps the sprouts blanched and succulent. Prepared with salt, they are excellent as an accompaniment to rice; boiled in syrup, they form an important element in many of the best Eastern preserves and sweetmeats; and with vinegar and capsicum pods, a pickle of exceeding excellence is made from them. Many of the large hollow stems contain a very considerable quantity of cool, palatable fluid, the presence of which is ascertained by the experienced, by shaking the cane in a sharp, peculiar manner, when the sound emitted by the imprisoned fluid discloses its whereabouts, and the cane is tapped for its obtainment. This juice is not only an agreeable and refreshing drink, but is said by the natives to be particularly wholesome. It is somewhat curious that the siliceous element found covering the outside of the cane, like a varnish, should be held in solution by this fluid. But that it is so there can be no doubt, as when the liquid or sap is allowed to remain for any length of time in the tubular cavity of the cane, it either becomes absorbed altogether, or leaves a hard concrete substance, far more like a mineral than a vegetable production. Possessing, in fact, all the attributes of an earth product, it is not acted on by any of the ordinary acids; it remains unaltered by fire; and forms with the alkalies a clear glass, just as flint would. This is the celebrated "Tabascheer," so renowned throughout the East for its marvellously curative properities; and it is not improbable that this, like many other Oriental productions, may contain virtues little dreamed of by the medical practitioner at home.

A decoction of bamboo-leaves is esteemed a specific in all catarrhal affections. A highly prized salve is made from the root, mixed with tobacco-leaves, betel-nut, and oil. The outside rind is extensively used in cases of a febrile tendency, and an infusion of the young buds is frequently made use of as a cooling drink. So much for it in a medicinal point of view.

"Blessings on the bamboo," say the Hindoos. It makes you well if you are ill, and is very nice food into the bargain. There is a sort of forest dainty which the Hindoos are particularly fond of, and this is its mode of preparation: Young bamboo sprouts, fresh and crisp, are gathered, cut into small pieces, and placed with an equal proportion of honey, plundered from some colony of wild bees, in a bamboo joint of goodly size. This luscious compound is then tightly pressed home; a coating of rough, tenacious clay is moulded over all. The mass is then roasted slowly and carefully over a clear wood fire, until the splitting clay and browning cane show the experienced and watchful cook that the roast is done to a turn. When served on a freshly-gathered plantain-leaf, it is a delicacy not to be despised or thought lightly of.

By the Chinese the seeds of the bamboo are used extensively as an article of food, and during periods of scarcity whole districts are mainly dependent on them for their daily support. Chinese historians and poets have extolled the innumerable uses and virtues of the bamboo, using it as a type of all that is good and graceful.

Water-wheels are entirely made from it. Water-pipes, miles in length, are formed by uniting the larger joints end to end. Buckets, cups, boxes, agricultural implements, weapons of war, and even boats and ships of very considerable tonnage are constructed from this material alone, the hull, masts, yards, sails, and even many of the ropes being made of bamboo, either whole, split, or twisted; some of the most powerful bows we have ever seen were in the possession of the Bheels of Candish, which with their strings and the arrow-shafts, were composed of bamboo only. Throughout the East bamboo pens are preferred by the "learned Pundits" for transcribing their voluminous writings.

The *pellet bow*, too, with which the Indian sends his ball of sun-baked clay with such wondrous precision, is formed from a split bamboo. Houses are built, roofed, and floored with it; whilst the ingeniously constructed mats which serve as blinds to the windows, admitting light and air, yet excluding the ardent rays of a mid-day sun, are made of split cane. Baskets, brushes, brooms, and the shoulder-poles for carrying burdens are of cane, as

are nearly all the various contrivances used in the Eastern fisheries, such as rafts, outrigger boats, net scaffolds, &c. &c.; whilst floors, flat stages, and platforms are made from certain kinds, which having an incision made in them from end to end, are then flattened out and pressed until perfectly even, when they are used much as we use deal planks. A deep well may be excavated by splitting up the end of a long bamboo, and working it up and down in the ground until the filaments are clogged with earth and stones. These accumulations are shaken out at the surface from time to time, and the cane again introduced until a round hole of sufficient depth to reach the water has been formed. The benighted pedestrian provides himself with a walking-staff of split cane, the noise of which scares the snakes from his path. (We have often carried one of these when cobras were unpleasantly numerous.) The running postmen of India carry hollow bamboos with iron rings loosely fixed on them, so that the sharp clanking sound they give out may keep the prowling tiger at a respectful distance. Indefatigable John Chinaman, like Robinson Crusoe, is incomplete without his umbrella. Robinson constructed his partly of goat-skin, John makes his solely of bamboo,—the stick, the frame, and the cover. By steeping the wood and separating the soft white lining before referred to, a very serviceable description of paper is made, which is applied to numerous useful purposes, umbrella-covering amongst the number. A coat of varnish renders it impervious to rain, and its light colour readily reflects the sun. In certain islands of the Malayan Archipelago, the inhabitants have ingeniously converted the growing bamboo into a natural instrument of music, and by perforating it with holes of different sizes according to the dimensions of the joints, the passing breeze eddying round and passing into them, produces tones and cadences of the sweetest melody, swelling and dying away like the sweeping strains of some huge Æolian harp, and charming the listener by their extreme wildness and apparent mystery. This forest organ is called by the Malays "Bulu Perindu," or the cane of melody. Other instruments less pleasing in their notes are constructed from bamboo joints arranged size after size, and struck with a wooden hammer: these are called "Ankalongs."

Flutes and fifes of ear-piercing shrillness are constructed from the smaller joints, whilst "Pan's pipes" are merely "Ankalongs" on a very small scale blown into instead of being struck. As an instrument of government, civil, military, and domestic, the bamboo reigns paramount in Eastern lands. Nothing can be done without its assistance. The governor of an unruly province, or the head of a family, alike seeks its aid in the maintenance of his due authority. As we see in the case of Hyson, Senr., when dealing with his disobedient but love-sick son :—

> "And as the thrasher swings round in a trice,
> The ponderous flail and thrashes out the rice,
> So whirling round his head a stout bamboo,
> He thrash'd his son, his son who dared to woo." *

From youth to age, in sickness or in health, in joy and sorrow, from the cradle to the grave, bamboo and the Eastern man are inseparable. Close up his mines, cut down his rice, and root up his fruit-trees,—he lives and struggles with adversity so long as his precious cane is spared. What would become of him if disease should fix on and sweep that away, is more than we can venture to speculate on.

* The Loves of Young Hyson and Bohea.

OIL PAINTING WITHOUT A MASTER;

OR, HINTS FOR AMATEURS.

By Mary Constance Clarke.

THE following hints for painting figures in oils are written for those amateurs who, not having been able to meet with good instruction, are yet desirous of trying to "walk alone" without the help of a master. The rules to be observed will probably be needed only by those who are teaching themselves, as the pupils of any master will, of course, wish to follow the practice of that master, in preference to any new or unaccustomed style. However, I hope that the experience of many years of study, and the results of much experimental painting, may not be found utterly useless to any amateur artist; and as I have so often been asked, "how I do it," I have endeavoured in this little treatise, to explain as well as I can, in writing, all that I have hitherto taught by word of mouth only. I am quite aware that many artists may object to several practices I have dared to suggest; but after having tried divers styles and modes of colouring, I have come to the conclusion, that for an amateur *without a master*, either of the following methods will be found the best to adopt. Trusting then, that these hints may meet with the approval of *some* artists, and be useful to those amateurs who are struggling on in the dark, and with whom I well know how to sympathize, I will, without further introduction, explain how a picture may be painted in oils.

To paint a *good* picture, whether a copy or an original, it is necessary that the pupil should know how to *draw*, that is, should know the *shape* of every feature accurately, so that an eye may not be painted like an almond, or a mouth with a straight line through it. In fact, a *slight* knowledge

of anatomy is very desirable, if the pupil wishes to produce a face or figure that will appear alive, instead of a wooden doll, prettily coloured. Taking for granted, then, that drawing has been properly acquired, I shall begin by suggesting that the pupil should put aside all ideas of washes and floating colours, and understand that oil colours are only to be *dabbed* on (thinly or thickly as the case may be) and the lights put in, not left, as in water-colours.

The first thing to be done, then, is to procure the following colours in tubes :—

Flake white.	Lake or rose madder.
Yellow ochre.	Indian yellow.
Burnt sienna.	Vandyke brown.
Raw umber.	Light red.
Cobalt.	Ivory black.
Prussian blue.	Vermilion.
Indian red.	

These colours are sufficient for everything, as the fewer varieties that can be used the better. Get also, a bottle of copal varnish. This should be pure and free from resin, or the picture will in time crack. That bought at a coach-maker's is said to be the best, but it sometimes requires thinning with a little turpentine, and may be troublesome to manage. A bottle of pale drying oil, and a cup or wide-mouthed bottle of common sweet oil ; one or two hog's hair brushes, and three or four sables, all of different sizes ; and one large round brush of the best camel's hair ; an old silk handkerchief, and a piece of linen or calico ; a wooden palette, and a palette knife ; and a prepared mill-board or canvas, make up the list of the apparatus required.

Now, begin by squeezing out on the palette a small quantity of raw umber, with one or two drops of copal varnish : mix them *well* with the palette knife (as you would mix salt with butter on your plate), and paint over the prepared millboard with a hog's hair brush, till it is as dark as brown paper. Then take the large round brush, and holding it perpendicularly to the board, strike it quickly all over the painted surface until it has an even, slightly granulated appearance : let it remain till the next day, when, if quite dry, the picture may be begun.

This should be first sketched on a piece of paper, and from this a tracing may be taken. Put out on the palette a *very* little flake white, with a small drop of copal mixed in it ; twist a corner of a cloth round the finger, dip it in the white, and rub it hard on a sheet of writing-paper, as thinly as possible, working it well in, to prevent too much coming off. Lay this, face downwards, on the prepared board, place the tracing-paper over, and draw the lines again hard—take off the paper, and the sketch ought to be seen clearly in white on the brown board. Sometimes the white paint will come off in spots where the pencil has not traced, but they may be wiped off carefully with a silk handkerchief, without injury to the outline. Common black paper will do instead of white, but the outline is not so distinct. Any one, however, who can draw readily and correctly, had much better make the sketch at once upon the board, in the flake white, with a small sable brush, having first rubbed a little drying oil on it and wiped it off thoroughly, with a silk handkerchief—this is to enable you to wipe out the outline from time to time, if incorrect, while wet. The sketch should now be left till the next day to dry, and then the colouring may be begun.

Suppose you are going to paint a head. Put out on the palette small quantities of flake white, burnt sienna, vermilion, and raw umber. Add some copal to them, and mix it well with each colour, wiping the knife carefully, after every mixture, with the cloth. The use of the copal is to make the colours dry hard and firm, which they ought to do in twenty-four hours, unless too much copal is used. The proper proportion is, one drop of copal to about four times the quantity of paint, and great care must be taken to mix them well together with the palette knife ; for where the copal and paint are separated, one part will dry much slower than the other, and must be more perishable, as it is not protected by the varnish. Never be tempted to paint any part of your picture without copal, to save time ; for, although it will look quite as well as the other parts at first, it will not dry as quickly, and in a few years (or even months, sometimes), the picture will show the difference.

Now, rub some drying oil over the sketch, and wipe it off again as before ; and do this before beginning each day's work ; only be sure that the picture is dry when you oil it. Take a little of the flake white, and a touch of burnt sienna, blend them together with a sable brush, just to make a pale flesh tint, and paint very thinly the light parts of the face, neck, &c., leaving all the broad shadows in the brown ground. You will find that wherever the flesh tint is very thin, it will give a delicate, pearly grey tint over the dark ground, which will serve in most cases instead of blue, and can never look dirty, as blue sometimes does. Subdue the white outline with raw umber. Mix, and use, vermilion and white for the cheeks and lips, and do not let any other colour get into this while wet, or it will look dirty. Then put in, very thinly, the reflected lights, with the flesh tint, and the bright high lights on the forehead, nose, chin, &c., with white alone, according to the high lights of the copy, the whites of the eyes, and the tint of the eyeballs, blue and white, raw umber and white, &c., according to their colour, and the pupils in ivory black : only leave the ground for the shadows, and paint thinly, so as to allow it to shine through, except in the very high lights, which may be painted thicker. Then paint a little of the background round the face with whatever colours are in the copy, or that you may choose, if painting from nature ; only, if you use cobalt, you must also use cobalt in all the blue-greys of the flesh, and the same with Prussian blue. The latter is the best colour to use. Cobalt, raw umber, and white, or Prussian blue instead of cobalt, make a good background. If you have much ground to cover, mix the tints on the palette with the knife, as the brush will not do it so evenly and effectually where

there is much colour to mix at once. Take care never to let the background be darkest close to the face, or it will appear to touch it, and there will be no *air* behind the head. It should be quite flat and even, or a *very* little lighter (almost imperceptibly so) just where it is painted close to any part of the face or figure, &c., unless, of course, they really come in contact, as might be the case, were a chair or cushion to be the background, and then the shadow of the figure cast on such objects should be carefully defined in shape, to show that it *is* shadow, and not dirt.

Now, put in the hair, slightly touched in the lights with raw umber and white, and darkened in the shades with raw umber alone. Also the dress, with whatever colour it may be, only thinly painted at first. Remember, in all parts of the face and figure, to keep the lights and shades quite clear and distinct; that is, the shadows must have a definite shape, according to the form of the feature, look of hair, drapery, &c., that casts them; for, if they are allowed to be indistinct, they will only look like dirt on the face. The edge of each shadow, may, after its form has been carefully left by the flesh tints, be slightly softened by touching it gently with the brush that the flesh tint has been put on with, after having wiped it on the cloth to remove *some* of the paint. This will do for the first day's painting, and the picture had better dry before any more is attempted. The brushes must now be washed in turpentine, wiped, and dipped in sweet oil, before they are put away, and the oil carefully washed out again with turpentine before use the next day, as sweet oil will not dry, and must on no account get into the paint; its use is only to prevent the brushes getting stiff and hard while not in use. The brushes may often be washed in turpentine, and wiped, while the painting goes on, if needed, but *not* in sweet oil. The palette must be scraped clean with the knife, and wiped with the cloth, and rubbed with a little *drying* oil, to polish it, and the paint thrown away. It is of no use to try to keep it in water till the next day, for it becomes very disagreeable to work with; therefore, to prevent waste, no more should be put out on the palette than will be wanted for each day's painting. If the paint sticks to the palette, and does not wipe off readily, a little turpentine will clean it effectually.

Second painting. If quite dry—which may be tested by touching it with the finger—rub a little drying oil over the picture, and wipe it off again, as before. Then put out the same colours on the palette as on the first day, and after washing the brushes in turpentine, wipe them, and let them dry a few minutes. Then begin to paint in the flesh tints as before, putting in more white in the bright lights, and painting all the paler shadows over with flesh tint, till they are nearly of the right strength, and lay on the same in the darker shadows thinly and sparingly, always remembering that every shadow has its depth. In painting over the dark shadows with the opaque flesh tint, great care must be taken not to put it on too thickly, but let it appear like a thin veil, over the raw umber ground. Paint the *lights* more thickly, so as to leave the thinly-painted parts of the day before to serve as half-tint.

Now, you may alter the drawing of any part of your picture if defective, but this must be done with care, so as not to get the picture hard and wooden, or dirty; and always use raw umber, or raw umber and white, for any alteration in, or addition to, the shadows and half-tints; as long as raw umber and white are alone used, the picture will keep its clean and fresh appearance. And don't be tempted to put in any blue or yellow into the picture at present, although you may see it in the copy, or in nature. Paint the dark lines and shadows of the mouth with vermilion and raw umber, or vermilion and burnt sienna, according as you require darker, brighter, or lighter shadows, and the half-tints with vermilion alone. Then put a slight touch of vermilion in the reflected lights, if they are warm, and in the centre of the darkest shadows, such as that cast by the nose, and in the deep shade of the nostrils, in the shadow cast on the throat by the chin, on the chin itself where the shadow is deep, in the corner of the eyes, in the upper line of the upper eyelid, under the ear, and inside it, &c.; and in the shadow thrown on the flesh by the hair, dress, &c. You will always find this warm tone in nature, unless some other colours in the dress, background, &c., are reflected more strongly, but it is never such an agreeable effect if they are. The vermilion in the deep shades may be subdued with raw umber and white, if too harsh and strong. It is only of use to give a rich, warm glow to the shadows. Some artists use Indian red for this purpose, but it is so apt to become heavy and dirty if used unskilfully; and its tendency to give a dull lilac tone to the flesh, makes it a very undesirable colour to use, except in draperies, when glazed with other colours, or in the shadows of clouds in landscape backgrounds.

Wherever you see a grey tint or shade, leave the flesh tint thinly painted on the ground, as this gives the pearly tint I before mentioned, and it is better than any blue colour laid on, until quite near the last painting, as blue is so apt to look heavy and black if not most skilfully used. Pure white alone will look quite blue on the brown ground, unless the latter has become very much lost in the colouring; and it will look blue if painted over any part that has been touched again with raw umber, or glazed.

Be very careful to leave no hard lines. There is no *line* in nature; therefore, to prevent the picture being wooden, and to give the soft appearance of flesh, stipple along the edge of every *line*, with shadow or half-tint as the case may be, until the line ceases to be a line. To explain my meaning better, I will suppose you have painted in the lips and the dark shade between them and on the upper lip. You will find that there is more or less of half-tint above the edge of the red of the upper lip; this should be stippled with raw umber and white, where the red and flesh tint join, and the red itself stippled at the extreme edge with rather lighter red.

So that although the lips will appear quite clearly defined in shape, yet the outline will have no line or sharp edge to mark it, but one part will melt into the other imperceptibly. The same must be done to the division between the lips, also the lower edge of the under lip, the outline of the face, neck, &c., where the hair or background comes in contact with it; the lines of the eyelids, &c., and even the eyeballs and pupils of the eyes, or they will not look liquid and clear, but have the appearance of the eyes of a painted doll. The edges of all shadows that have been left hard in the former painting, must be treated in the same way; using, of course, the same colours that each part has been painted with. In short, do not let a single line or sharp edge remain without this stippling. At the same time, be *most careful* to preserve the true shape of all the features and the shadows, or the picture will look woolly. Experience, and a *good* copy, will show what I mean, and the pupil cannot fail to see the necessity of this careful stippling.

I should recommend the copying of one or two good pictures, before trying from nature, as it is very puzzling at first for a beginner to find out all the delicate gradations of shade and tint that really exist, until the eye becomes educated, as it were, and learns to see what variations of tone and colour, shadow and half-tint, are to be found in what at first appeared only one smooth, unbroken surface. Be careful to paint the picture, up to this point, a much lighter and cooler tone than you intend it to be when finished, as the glazing will darken and enrich the tints every time it is applied.

The hair may now be painted in again, according to its colour; light hair, with raw umber and white; dark, with raw umber and black, or burnt sienna and black, &c.; very light golden hair, with a little yellow ochre added to the raw umber, and the lights put in with white; the dress and background may also be finished a little more. Then let the picture dry thoroughly.

Third painting. Now scrape the picture over carefully with the palette knife to remove any rough, uneven patches of paint or any dust that may have stuck to it; but this must not be done unless *quite* dry, and if the picture has been laid aside for some time so as to get dirty or smoky, wash it with a clean sponge dipped in water, and wipe it dry with a silk handkerchief, but do not use soap. When quite dry, the painting may be begun by rubbing drying oil over the part to be worked upon, as before, and it should then be glazed; but this must not be attempted unless it is as dry and hard as possible.

Now mix a *very* small quantity, just a *touch*, of rose madder or lake, and the same of yellow ochre, on the palette with as much copal varnish as will make a mixture just tinged with a rich orange-red, which the rose madder and yellow ochre will give, if in proper proportions, and with a large dry hog's hair brush, take up some of this mixture and paint it hard and evenly all over the face, going over into the background and dress, &c., and up into the hair, without fear, as it will give harmony to the whole. The flesh tints will then be slightly darkened and enriched, and the shadows become more transparent. Then put out on the palette the same colours as at the first painting, mixed with copal, and begin painting into the glazing, while wet, with the flesh tints thinly as before, putting vermilion and white on the cheeks and lips, in short, all the colours again in every part of the picture as in the first painting. Imitate now as much as you can the finished tints of the copy, or of nature; paint the bright lights again, as the glazing will have taken off their sharpness and touch, also the whites of the eyes, as they will have become too much tinged with the red of the glazing.

Of course I need not say that all parts of the figure, neck, hands, and arms, &c., must be painted in the same way as the face. And now a little blue and white with a touch of raw umber to prevent it looking harsh, may be used where much blue or grey is seen in the copy, only take care not to let it get mixed with the vermilion, for that would make a blackish purple tint, very unlike nature.

There is always a grey tint at the edge of the warm shadows, which should be put in with blue, raw umber, and white (if not already left by the ground shining through the flesh tint), and a little yellow ochre and white, where yellow prevails in the flesh tints, if the glazing has not been sufficient to give the required yellow tone (which it ought to have been). This finishing, refining, and retouching into the wet glazing will be enough for one day's painting.

Fourth painting. Glaze the hair with such colours as will give the tinge of colour required, but take care that the part to be glazed is perfectly dry, and remember that no white must ever be mixed with the glazing, only painted into it after it is rubbed on the picture, or it will look milky instead of transparent. Paint in the lights of the hair with white mixed with yellow ochre or raw umber, &c. Burnt sienna is useful sometimes to glaze auburn hair, or very warm golden hair, but *always*, while the glazing is wet, paint into it with opaque colour (not all over it of course). There are many tints in the hair, as from the brightness of its nature it reflects all the surrounding colours; therefore look carefully what are reflected, and add them when painting into the glazing. Glaze also the dress now, which, even if white, will need a glaze of a yellowish tinge, and paint white again into it, and bluish-grey or yellowish-grey into the shadows, according to their colour. I should observe that the glazing must not be entirely lost in the after painting, only improved by it, and this glazing and repainting may be repeated as often as the picture seems to need it, only taking care that it is quite dry, or the first glazing will be rubbed up and spoil the picture, and never attempt to wipe out wet glazing—it will often make the picture smeary and sticky, and give endless trouble in trying to recover what has been lost. If you are dissatisfied with the tint, leave it and paint into it while wet, until the tone you had lost is restored again as much as it can be; it will give you trouble no doubt, but it is better than trying to wipe it off.

However, if you do wish to attempt this, rub it with a silk handkerchief dipped in drying oil. Where you have no wet *glazing*, you can wipe out the paint as often as you please before it is dry.

Should the paint be sticky and seem to harden too much on the palette and be difficult to work, it is either ropy from age or it requires more oil. If the addition of a little drying oil fails to make it work well, discard it and get a new tube of colour, for it is only waste of time to work with it. Flake white is often in this state when old. The background should now be finished by glazing and painting into it as in the other parts of the picture. If, after any glazing, you find that the painting into it has not been sufficient, but that another glazing would not be required, the picture being dark enough in tone, glaze with copal varnish *alone*, and paint into that.

Should any of the lighter parts of the picture be too dark, they may be painted thinly over again with lighter colour, without glazing first. This is *scumbling*, but it is better to do this only in a background, such as the sky, or to give a distant effect to trees, distance, &c., as it is not so good for near objects. Some artists rub it on with the side of the *thumb* and say it gives a better surface, but if used in the face or figure, &c., it should be glazed again and painted into as before, and *not* rubbed in, but painted with the brush. Of course, it is quite impossible to make any rules as to how much must be done at one painting. It depends on the subject and the time the pupil can give to it; only, if it can be avoided, no glazing should be left to dry untouched by the opaque colour to be painted into it. Therefore, if there is but little time for the work, it would be better not to glaze, say the hair and dress at one sitting, or the background and any other part. The face and neck should be done at the same time if possible, or it will be difficult to make the colouring of each part harmonize: only I know the trials of amateurs, their interruptions and want of time for a long day's painting, and I therefore recommend them to consider well, before they begin their day's work, how much they can do in the time allowed them, and to put on no more glazing than they have time to paint into. There is nothing else now that need be said about the finishing of the picture. Of course the pupil will go on as I have directed until it is worked up to the finish of the copy, or to what is considered sufficient, if painting from Nature. (Instead of painting the ground brown, a piece of smooth brown millboard may be used, but it does not work so easily). There is one thing that almost all amateurs, even those who can draw well, are apt to forget, and that is, that every throat, even that of a baby, shows more or less of muscular development, and it is a very common thing to see a well-drawn face with a throat as if turned in a lathe or as flat as a plank; accordingly some faint indication of muscles must be shown; and even the palest grey tint will often give shade enough to show that the throat is not an even polished surface. Therefore the anatomical form of the throat and neck should be learned in order to see where, in the beautifully rounded throat of a woman, or in the little fat dimpled one of an infant, the muscles and bones are *indicated*, although perhaps almost imperceptibly to an unpractised eye. The ear also is often left very sketchy, instead of every part being carefully drawn, and to the eye of an artist this has a very unpleasing effect. It is a curious fact, but a true one, that the ancient sculptors left the ears of their statues very unfinished, and consequently many people who have learned by drawing from casts do not know how an ear is really formed, although they can draw a face perfectly. The corners of the eyes, too, are seldom drawn properly; generally the upper and under lids meet in a point at each end, and the canthus (as it is called) at the inner corner is left out altogether. This is just the shape of a doll's eye, and is frightful to look at; one eye is also frequently drawn larger than the other and not parallel to the mouth and nostrils; this should be carefully attended to, as no colouring, however good, will make up for such defects.

In drawing the outline, it should not be done with smoothly curved lines, but with bold angular strokes, which will become rounded in the painting, although the *squareness* of this outline should not be *quite* smoothed away, or the picture will have a weak and poor effect. These last few hints are only intended for those who have taught themselves to draw: of course the pupils of a good master will not need them. If any one should object to the effect of burnt sienna as a flesh tint, and should desire to have a more rosy colour, light red may be substituted: but this is according to the taste of the amateur or the colouring of the copy, and it will most likely need more yellow in the glazing, or perhaps yellow ochre and white must be painted in with the flesh tint. Should the pupil find great difficulty in painting on the dark ground (which, however is the best, as it gives softness and harmony of tone), the raw umber may be rubbed on very thinly like a mere glaze, just to tinge the white ground, and then the shadows must be painted in with raw umber before putting in the flesh tints; and nearly all the greys must be *made* with blue, white, and raw umber; but, as before, they should not be put in till the picture has proceeded some way, for fear of making it black and dull from the blue getting too much mixed with the other colours. By this method it will be more difficult to get the grey pearly tint produced by the flesh tints and the white on the *dark* ground. I omitted to mention, that in cleaning the brushes most people wash those of hog's hair in soap and water; but it is a bad plan, it spoils the shape of the brush, and, if the soap should not be *perfectly* washed out, it will injure the colours. In about ten or twelve months the picture should be varnished with mastic varnish.

I will conclude by reminding those who are anxious to succeed in oil painting, that they must not be discouraged by a few failures at first. There is no royal road to painting in oils; but a little practice will soon overcome any difficulties that may be experienced at first by a beginner.

ART IN THE FOREST.

By G. W. Yapp.

IT is said of French artists, that they study human nature at the café and the theatre, look at the world from the window of a fifth or sixth floor, go to the Jardin des Plantes for their lions and tigers, and draw their landscapes from the depths of their own imaginations. It is true that many of those in Paris indulge in too much chamber practice and take nature far too readily at second hand, but there are many exceptions. All French artists are not Parisians: there are hundreds of modest studios on the banks of the Loire, the Gironde, and the Rhone, where works are produced every year for the metropolitan exhibition; and, amongst Parisians, Horace Vernet and many others have wisely set up their easels at Versailles and other charming localities. Troyon lived and died at Sèvres, and Hamon paints poetry while looking on the blue waters of the Mediterranean. Artist village life, in fact, has of late years become common in France. There is a colony at Ecouen, about a dozen miles from Paris, and the Forest of Saint Germain and other picturesque spots are dotted with artists, who find fresh air does not disagree with them, or injure their art. But Fontainebleau has for a long time been one of the most favoured haunts of the painter. It cannot be said that there is a Fontainebleau school like that founded, or rather commenced—for the continuity was soon solved—by Primaticcio, whose few unspoilt works are still the glory of the old château there; but there is a crowd of artists in the famous old forest in the summer season, and others, who reside continually in or near the town, have their ateliers, in fine weather, beneath clumps of noble trees, amidst the warm, grey sandstone nestling in moss, fern, and heather, and glowing with richly-tinted lichens of a hundred kinds. At Barbizon, a village in the outskirts of the forest on the Paris side, there is a complete artistic colony, and so many of the brethren visit the place during the summer, that the walls of the Maison Jaune, the only inn in the place, are covered everywhere with sketches, some of which are works of merit. Rosa Bonheur lives at Thomery, a village at the other extremity of the forest, famous for its dessert grapes, the renowned *Chasselas de Fontainebleau*, and there tends with sisterly care the cattle which she immortalizes. But perhaps the most complete specimen of artist village life is to be found at Marlotte, a little place which has come into repute within a few years.

Marlotte is situated at the very edge of the forest, and is distant about two miles from the Montigny station of the Bourbonnais branch of the Lyons railway. It is a clean, stony little place, containing about two hundred houses, and five or six hundred inhabitants, and the first things likely to strike an observant visitor is the abundance of grape-vines and the paucity of windows; in fact, the latter seem all to have been turned into the courts and gardens, in order to make room for King Vine, who basks in the sun, morning, noon, and night, on the front of nearly every house in Marlotte. The stems of the vines are generally six or more feet in height, in order, perhaps, not to lead little people into temptation; and being of all sizes, ragged and twisted, present a strange appearance. Sometimes they grow within a garden, where their roots may be more comfortably accommodated than beneath the grey sandstone. But however they may be arranged, almost every house, wall, and gate, looking south, east, or west, bears its Bacchanalian banner, and the huge branches of fruit generally hang in thick, luxuriant clusters. Such was and is still the case this year; but alas!—to use a venerable figure of speech—such a cold, wet August was never known in Marlotte, no! "not in the memory of the oldest inhabitant!" In many places the berries are shrivelled and dropping off, while in some cases the leaves too have fallen and left but a stick behind, and even where the damage is least, the grapes, though of good size, will be poor and watery. It is always said, in the wine districts, that three good vintages never yet came in succession, and, according to all appearance, that of 1866 will prove a sad contrast to those of the two past years, when the vines were loaded with luscious fruit, and the difficulty was not to get wine, but casks to hold it.

You may walk through Marlotte from end to end in about ten minutes, you may notice a timber-yard and a blacksmith's shop, but for a butcher's or a baker's, a grocer's or a linendraper's, a chemist's or an undertaker's, you may look from early dawn to dewy eve, and find never a one. Still, there is no reason for being starved in Marlotte. Milk and eggs are abundant; several dames make a pound or so of butter more than they want for their own consumption weekly, and you are perfectly welcome to it, provided no one else has bespoken it; fruit and vegetables are most plentiful, only they are all taken to Fontainebleau, or elsewhere, in the middle of the night, which the jolly *paysannes* call the first thing in the morning; the bakeress will bring your bread from the next village between breakfast and dinner-time, unless anything should interfere to prevent her; and you may generally get whatever meat you require at the same place, if you order it on a certain day, and will walk a mile or so across the fields to Bourron to fetch it, unless, indeed, you commission the obliging postmaster-and-man, as we did, to bring it for you in the basket with your letters. To make up for deficiencies in one direction, there is a perfect plethora in another: if Marlotte is without bread, she has plenty of water; there is a great stone-covered well in every corner, for everybody's use, only in many cases you

have to carry to it your own rope as well as your bucket. The provision for intoxication is eminently satisfactory, there being two wine-shops, each of which has a large room at the back, with a billiard-table, and seats for thirty or forty persons. Both of them sell tobacco in all forms, and one has, in addition, an interesting assortment of laces and braces, wooden shoes, lucifers, and sweetmeats. These are the taverns of the *paysans;* there is another for the *bourgeois*—the universal name for all visitors, not agricultural, in France; and without it Marlotte would scarcely be Marlotte. This is the Auberge Saccault, kept by the Mère Anthony, the good genius who provides shelter and creature comforts for all forlorn bachelors, and some few other *bourgeois*, for a sum per day that would hardly afford you one decent meal in Paris. It is a jolly party that meets around Mère Anthony's mahogany (it is not quite certain that it *is* mahogany, but that matters little) twice a day; the convivial hall in ordinary is the *salon*, behind the billiard-room—this makes three billiard-room in Marlotte; but when the skies are propitious, the dinner-table stands outside, not exactly in a garden, and yet not in the street, or in a paved court, but in that part of the establishment where pigs and poultry most do congregate. The architecture of the Hôtel Anthony is not pretentious, the façade is simple, the entrance equally so, and the approaches somewhat confined; but the Mère Anthony knows how to make good *potage*, does a *rôti* to a turn, is grand at an *entrée* or an *entremets*, and irreproachable as regards *café noir*. Happy Marlotte and happy *bourgeois* to possess such a *cordon bleu!*

But the Mère Anthony's establishment is not without embellishment: the *grand salon* is a gallery of art as well as of gastronomy; the walls of that classic room are rich in decoration. In one corner are seen walking in the forest a well-to-do *bourgeois* with his elegant wife, life-size, capitally sketched, including the lady's red plume. Opposite is the figure of a sturdy little man with fierce eyes: this is Murger, the poet, who found a refuge from the world which he had renounced, in quiet Marlotte, and who helped greatly to give the village celebrity. On other parts of the wall are wonderful Mephistophilean figures, grotesque masks, and caricatures of the wildest kind, all rather unfinished, and far from being in perfect condition; but they are in their place, and no paper-hanging, however gay, or however fresh, would be half so well in keeping with the *genius loci* as these cartoons of the Anthony gallery.

It is said that no house is without a skeleton in its cupboard. Let the snarling cynic hug his pet proverb; he will miss many a jewel in his search after the bones. The Mère Anthony is not a fine lady; she works hard, and dresses plainly, and if she sometimes sheds a tear while peeling onions for the *potage*, she does not lay claim to special sensibility or virtue on that or any other account; but if she have no skeleton, she has something else in her cupboard that perhaps every house cannot show. Roses did not always grow under the good woman's feet, or if the roses were there, so were the thorns. The Père Anthony, if report speak truly, gave more attention to the quenching of his own thirst than to anything else, and when he left the world, his widow had to begin life anew, as it were, and a hard time she must have had of it. One day a lady with an infant came to the Auberge Saccault, and not long afterwards the lady was gone, but the infant remained. Now Mère Anthony being, you see, a poor struggling widow, probably with a legacy of debts upon her shoulders, could not be expected to take upon herself the charge of a child, about whom she knew nothing but that it was cast adrift upon the wide, wide world by a hard-hearted and perhaps wretched mother; and so, in the very spirit of contradictory human nature, she took the child to her heart, and the little Nana knows no mother but Mère Anthony. Nana soon became useful, and is now the gay daughter, the "neat-handed Phillis" of the house, waiting on the *bourgeois* with modest alacrity, while her foster-mother toils in the kitchen. The Mère Anthony may be seen every day in her peasant's gown and cap, while Nana, if not "dressed in silken sheen" like a fine lady, to which rumour, of course, says her birth should have entitled her, is one of the neatest damsels in Marlotte, and quite a little lady amongst the good *paysannes* of the place. So the Cynic will allow that something far more charming than a skeleton is to be found sometimes, even in the cupboard of a little village inn.

Marlotte is in a dreadful condition from a governmental point of view: it has no *maire*, no barracks, not even a single *gendarme* or *sergent de ville;* no representative of Imperialism, with the single exception of the worthy little *garde-champêtre*, who, with beat of drum and "Oyez! Oyez!" announces the behests of the authorities of the canton, or tells the good folks that there is a sale to come off, or a dog gone astray. There is no gas, no petroleum, not even a lantern in the streets, which, when Madame Luna and the stars withhold their beams, are as dark as Erebus. There was no place of worship in the village till a short time since, when a zealous *bourgeois* built a small temple with a house or two beside it, and announced that he would not let his apartments to any one who did not attend his church. The good people smiled a bit at the zeal of the *marguillier* (the equivalent of our churchwarden); but the little place of worship is opened twice on each Sunday and fête-day, and the *marguillier* may be seen proudly carrying the church plate to and from it carefully tied up in a pocket handkerchief. Yet in spite of all the drawbacks, the Marlottians seem wonderfully happy. No servants are to be found, because every peasant can earn his five francs a day, and generally has his own strip of land, which he cultivates besides. As to rent and taxes, they seem nominal; and the forest supplies the peasants with nearly all their firing.

There is not a horse or *shay* to be had for money in Marlotte. You may get the loan of one

of the two or three traps or steppers, which belong to the resident *bourgeois;* but the chivalry of Marlotte prefers mules and donkeys, and Marlotte possesses some capital specimens. In the morning you may see half a dozen comfortably roomy carts coming back from market—when they depart from Marlotte marketwards is a mystery not often unveiled to *bourgeois* eyes—with two *paysannes* comfortably seated therein on rush-bottom chairs, and Master Jack plodding his way along in all the conscious dignity of one who has performed his duty, and who is about to reap his reward in the form of oats or hay. At haymaking or harvest time, Jack is equally useful, but presents a more comical figure: on his back hangs a kind of double ladder, armed at the upper edges with terrible spikes, and supported on the pack-saddle by two cross-pieces, and on this scaffolding are placed the bundles of hay or the sheaves of corn which form the burden. He cuts a queer figure, does Jack, with his head and tail just visible from beyond the load, and his nose covered with a small basket to prevent his indulging in promiscuous meals by the wayside: a habit pernicious and inconvenient in donkeys as well as men.

Some of the artists to be found in Marlotte are resident *bourgeois*, and form the aristocracy of the place. One has a charming *châlet* with a delicious prospect over a fertile plain to the skirts of the forest, and over the neighbouring village of Bourron to a distant range of purple hills capped by another range lying like a rich grey cloud beyond. Another has taken his ground on the very frontier of the station, and his studio windows look boldly out north, east, south, and west, without a screen between them, the forest, and the horizon. His gates shut him in from the world, and over them and the walls adjoining falls a mass of climbing plants which in itself would make a painter's fortune if he had the cunning to transfer them to canvas. Half a dozen houses form perhaps the whole body of *bourgeois* residences, and in those few retreats, it is no breach of confidence to say, there are produced pictures which decorate the walls of the Paris *Salon*, blocks and sketches for stone which illuminate the pages of French periodicals, and designs which come before the world on plates and cups of British manufacture.

The nomad population is more numerous and far more mixed. France, England, and America—art, science, and literature—all send their quota, though the whole congregation is but small after all. The married artists find their rural quarters in little farmyards, amid the pigs and poultry, over the chambers of sleek *crummies*, or other "useful coos," who graze by day on the rich herbage of the forest, and supply Marlotte with richly-perfumed milk; or in the cottage of some well-to-do peasant, who, having two, lets one of them for the season at about the price of two rooms in Paris for a month. The elder men, those who "have given hostages to fortune," and who know what responsibility means, may be seen quietly seated in the streets of the village, or in the roads which skirt it, or in choice spots of the forest, steadily working at a bit of nature very likely to find its way to London or New York, which are far better markets than Paris for landscape. The young artist refreshes his eyes and all his senses, sketching here and there a bit that pleases his fancy while roving, butterfly-like, over the rocks, under the trees, and around the tarns of the delicious forest; but his chief occupation at Marlotte, like that of his *confrères* of the pen or scalpel, is to bathe in the luxurious bath of nature; to stretch his limbs in tremendous pedestrian excursions, and lie on his back under the beeches when the toes begin to tingle or the knees to be slightly shaky; and to float on the surface of the Loing, a tributary of the Seine, when chaste Diana's silvery beams fall in splendour on the waters.

There is nothing fast or snobbish about Marlotte, and if there is any affectation, it is the affectation of simplicity; certain young men, whose paletôts are irreproachable on the Paris Boulevards, and whose whole *mise* is acknowledged to be perfect in the *salons* of the capital, walk the earth at Marlotte in the costume of the veriest *paysan*—perhaps, in a few cases, with a slight dash of the *opéra comique* over all. But they give themselves no airs, they patronize nobody, they are known to all the *paysans* and *paysannes* of the neighbourhood, who give them a cheery *bon jour* as they pass in the streets, and who are as civil, communicative, and unobtrusive as any people can possibly be. Marlotte life is just the place for a robust young Englishman—and he is generally represented there; but he must be thoroughly French as regards his mode of living, or he will find matters curiously new to his tastes.

Dissipation is not to be found in Marlotte, nor much attraction in the shape of amusement. Once we saw the community thrown into a state of considerable excitement by the arrival of a company of comedians in their own carriage, drawn by their own horse, and having a brass knocker to their door—an instrument which all Marlotte cannot boast of possessing. The principal lady of the company invited us, personally, as she partook of her soup at her own table in the high street, to attend the performance; and, later in the day, preceded by the light young gentleman, who certainly makes a noise in the world—on the drum, she did us and others the honour of setting forth, beneath our windows, in grand dramatic style, the attractions awaiting us. The performance took place in the ball-room of the place, which is no other than the largest of the billiard-rooms minus the billiard-table; but I understood that the "first lady" was not at all overcome with the patronage of the Marlottians, whom she is said to have declared to be rather a shabby set than otherwise. She was venting her ill-humour the next morning, while purchasing a duck for her dinner, poor thing, and in spite of the hints of her clever, bright-eyed daughter, the young lady of the company, when a *paysan* gave her this characteristic bit of advice:—"Well, if you are not satisfied with your lot,

with a duck for your dinner, why do you not go to work as we do?" It is impossible to express the disdain with which the *first lady* received this inquiry; it must have almost turned her artist's blood to gall.

Marlotte is situated on the edge of a fertile plain, half surrounded by the forest, with the spire of her somewhat bigger sister, Bourron, standing out opposite against the hills. The plain is a perfect garden, cultivated in small patches with every kind of crop, from potatoes to vines, for whose especial advantage, also, are constructed stone walls, hundreds of yards in length, and covered with trellis-work. Everywhere are to be seen fruit-trees of noble growth—the lordly walnut, laden this year with its green eggs, apple, pear, plum, and cherry, and especially the great trees which bear the blackheart kind of cherries, called in France *ginnes*. Certain young ladies, on seeing the tempting store of fruit on these trees, and deeply impressed with the severity which generally exists, in France, in relation to even fallen fruit, asked a worthy peasant how much he would sell them some *ginnes* for.

"Oh," said the man, "if you will take the trouble to gather them yourself, you are quite welcome to them; and if you pick more than a pound or so, you can leave two *sous* at my cottage there!"

Rural felicity! Fine cherries a penny a pound, and the weighing left to the purchaser's conscience!

Some of the finest spots in the forest of Fontainebleau are close to Marlotte, or within easy walk. The *Longs Rochers*, for instance, are a splendid range nearly two miles in length, enclosing within their sinuosities several exquisite plains that seem marked out as amphitheatres for silvan games. They are broken into the most romantic forms, covered with purple heather and green fanlike ferns, and enamelled with flowers. They possess, moreover, a cavern which furnishes shelter for a large party, and on whose floor may be seen, in spite of the forest laws, the marks of many a fire around which the gypsies of cultivated Paris have warmed their chilled fingers and dried their dripping habiliments drenched by the Aquarius of the region. The *Gorge aux Loups* is another fine rocky scene, where the pleasure of a moonlight ramble is heightened by the reputation of the place, and by the presence of a wolf-trap discreetly hidden from sight, but indicated by a placard or a wooden post, the inscription on which may be read if you are informed beforehand of its purport. The *Mare aux Fées*, again, where shadowy beings flit over the pools, and amongst the noble beeches and oaks which surround the still, cold, grassy waters, and many another lonely spot, lies buried in masses of pine and juniper, or towers aloft and commands prospects over the tops of miles and miles of forest to the blue-grey hills beyond. The sandstone and the crystals of Fontainebleau are known to every geologist, as well as to every sight-seer, who has visited the neighbourhood. The varieties of ferns, the beautiful branched mosses, the exquisite lichens, and the abundance of wild flowers, are the delight of all. And those who are curious in fungi will find a rich harvest, almost all kinds abounding in the forest, from the common toadstool to the true mushroom, which enters so largely into French cookery. There are six varieties of the *cèpe* or *bolet;* amongst which are the *cèpe ordinaire* (*Boletus edulis*), considered delicious eating in some parts of France, the *cèpe noir*, or *bolet bronzé* (*B. æreus*), the *bolet orange*, or *gyrolle rouge*, and the *Boletus cyanescens*, blue and poisonous. Some of these grow to a gigantic size, and we picked some the other day which measured a foot in height and ten inches across the head. One of the most curious fungi of Fontainebleau, however, is the *Gyrolle*, called also *Oreille de Houx* (*Agaricus agnifolii*, Poulet), of a bright orange-yellow colour, and which often gives the ground the appearance of being strewed with orange-peel; it is peculiar in form, the top being slightly hollow, the edges indented irregularly, and the stalk thickening upwards and channelled. The surface is waxy, and it strikes every one as looking just like a clumsy attempt to model a flower in yellow wax; a more poisonous-looking thing it is scarcely possible to conceive, but it is not so, and is eaten largely at Marlotte and elsewhere. We ventured upon a dish upon one occasion, but found it so like our idea of a stewed kid glove, that we did not ask for any more *Gyrolles*. We have met with a very delicate-looking fungus in the forest, the name of which is unknown to us; its form is that of the common mushroom, only the top is thinner and more fragile, and the whole is translucent and as perfectly white as if it had been carved out of the finest ivory—or rather out of vegetable ivory—while the entire surface is covered with a fluid which seems to be watery, not viscous, and gives it a peculiarly fresh and polished look.

It is disappointing to see a forest with so little game, and such a want of singing birds, as that part of it which lies about Marlotte: here and there a solitary deer, very rarely a pheasant, a hare now and then, but plenty of rabbits; the too-whit of the night owl and the cry of the rabbit or hare when in danger are the best-known sounds in the woods. But the naturalist who loves butterflies and beetles, lizards, salamanders, big ants, and frogs, will find a splendid field of study. There is one creature, the viper, for which Fontainebleau has a bad reputation, and against which ladies as well as gentlemen wear leggings; but although they exist there, they are not numerous.

An old forest would be unworthy of its name if it had not its spectre: the spirit of Fontainebleau is the *Grand Veneur*, the master of the hounds long gone to the dogs, the black huntsman who appeared to Henry IV. just before his assassination. There can be no doubt about the truth of the legend, for the *Croix du Grand Veneur* still stands in the forest to prove it. However, the black huntsman has not been seen lately; but there is another spectral exhibition which may be seen every night in several parts of the forest. At the point where the Marlotte road enters the domains of the black huntsman, and where communal rule

ends and forest law comes into force, there are observed, from March to September, two unquiet spirits, one of whom, in the dead of night, drags unhappy trees from the bosom of the woods, and hews them to pieces with fiendish delight, while the other piles them on a fire which burns with fury from sunset to sunrise. At intervals these spirits raise a fiendish cry—*Tow ! Tow ! !*—which is answered by other spirits far away in the black night, till the forest echoes again with their noisy clamour. The good people of Marlotte often pay a visit to the watch-fire of the *veilleur*, as he is called, and some credulous people declare that his occupation is to prevent the deer and other game from coming out of the forest, and devouring the crops in the plain ; that there are other *veilleurs* stationed at other exits from the forest, which is completely fenced in, except at these places ; and that the spectral sounds they utter are nothing more than the *Taïaut ! Taïaut ! !* of Saint Hubert, the original of our *Tally-ho !* But why does the giant, who splits the young fir and oak trees with such herculean force, emit such uncouth sounds when his axe enters the heart of the wood, and shrink into the darkness when strangers approach ? The simple country people say that when the young giant was in his cradle, a weasel ate away his face and left him a half-witted Caliban ; that since he grew up he has felt but one desire, one craving necessity—to be ever cutting, rending, destroying something ; that he works all day in the stone-quarries in the forest, where the picturesque sandstone is converted into most prosaic paving-stones ; and that, when night comes, he does the *veilleur's* work out of pure love for labour, like the Goblin in *L'Allegro*, of whom Milton sings that—

> "In one night, ere glimpse of morn,
> His shadowy flail hath thrash'd the corn,
> That ten day lab'rers could not end ;
> Then lies him down the lubber fiend,
> And streteh'd out all the chimney's length,
> Basks at the fire his hairy strength,
> And crop-full out of door he flings,
> Ere the first cock his matin rings."

It may be that the maker of the spectral fire which blazes warmly in the solitude of the night is a mere prosaic game-watcher, and that his man Friday is a half-witted fellow who likes spending his nights out ; but we prefer to believe that the black huntsman has something to do with it, and we are convinced that when traversing the *Longs Rochers*, the *Gorge aux Loups*, or the *Mare aux Fées* in a dark night, there is something weird and spectral about the *Taïaut ! Taïaut ! !* hurled by these fiends or watchers across the forest to one another.

We have shown, we think, that the French artists and their friends have exhibited their judgment in the selection of a summer retreat ; and when we add that the country around is full of interest, abounding in lovely scenes, rich valleys, delicious hills, and historic ruins : who will be surprised that those who can pack up their work, or leave it behind them, should quit the half-molten asphalte of the Paris Boulevards and streets in the dog-days for the giddy precipices, the shady bowers, and the mossy banks of glorious old Fontainebleau ?

THE RAFFLESIA ARNOLDI.

By John R. Jackson, Curator of the Museum, Royal Gardens, Kew.

NOT long since, at one of the scientific meetings of the Royal Horticultural Society, Mr. Bateman, the celebrated orchid grower, brought up, as a subject for the lecture, the giant flower of Sumatra, *Rafflesia Arnoldi*, with considerations of the possibility of its introduction in a living state, and its cultivation in this country. Though a period of forty-eight years has elapsed since the discovery of this extraordinary plant, it has never yet flowered, or even been in cultivation in any European botanic garden, so that, if it were now to be successfully cultivated, such an occurrence would have to be recorded as a horticultural triumph.

The Rafflesia Arnoldi is a most interesting plant, not only to the botanist, but also to the general public, and it is remarkable, that, though so long a time has elapsed since it was first seen by Europeans, nothing has been done to make the plant popularly known, though, of course, accounts of it appeared at the time in scientific works, and an elaborate and minute description was published in the "Linnæan Transactions," by that celebrated botanist Robert Brown. We are fain to believe, however, that a description of this vegetable peculiarity, to accompany Mr. Fitch's faithful representation of the plant, will not be uninteresting to the readers of Nature and Art.

The plant is, as we have said, a native of Sumatra, and was discovered in the year 1818, by Sir Thomas Stamford Raffles, Dr. Arnold, a botanist of some note, and other friends, whilst on a tour into the interior. The discovery was first communicated to this country in a letter from Sir T. S. Raffles to Sir Joseph Banks, then president of the Royal Society, dated Bencoolen, August 13th, 1818 ; and the description above alluded to is from a letter, written by Dr. Arnold to an unknown friend, which Sir Thomas found amongst Dr. Arnold's papers after his death. He says :—

> "Here (at Pulo Lebbar, on the Manna river, two days' journey inland of Manna), I rejoice to tell you, I happened to meet with what I consider as the greatest prodigy of the vegetable world. I had ventured some way from the party, when one of the Malay servants came running to me with wonder in his eyes, and said, 'Come with me, sir, come ! a flower, very large, beautiful, wonderful.' I immediately went with the man about a hundred yards into the jungle,

and he pointed to a flower growing close to the ground, under the bushes, which was truly astonishing. My first impulse was to cut it up and carry it to the hut. I therefore seized the Malay's parang (a sort of instrument like a woodman's chopping-hook), and finding that it sprang from a small root which ran horizontally (about as large as two fingers, or a little more), I soon detached it, and removed it to our hut. To tell you the truth, had I been alone, and had there been no witnesses, I should, I think, have been fearful of mentioning the dimensions of this flower, so much does it exceed every flower I have ever seen or heard of; but I had Sir Stamford and Lady Raffles with me, and a Mr. Palsgrave, a respectable man, resident at Manna, who, though all of them equally astonished with myself, yet are able to testify as to the truth.

"The whole flower was of a very thick substance, the petals and nectary being in but few places less than a quarter of an inch thick, and in some places three-quarters of an inch; the substance of it was very succulent. When I first saw it, a swarm of flies were hovering over the mouth of the nectary, and apparently laying their eggs in the substance of it. It had precisely the smell of tainted beef. The calyx consisted of several roundish, dark brown, concave leaves, which seemed to be indefinite in number, and were unequal in size. There were five petals attached to the nectary, which were thick, and covered with protuberances of a yellowish-white, varying in size, the interstices being of a brick-red colour. The nectarium was cyathiform, becoming narrower towards the top. The centre of the nectarium gave rise to a large pistil, which I can hardly describe, at the top of which were about twenty processes, somewhat curved, and sharp at the end, resembling a cow's horns; there were as many smaller, very short processes. A little more than half-way down, a brown cord, about the size of common whipcord, but quite smooth, surrounded what perhaps is the germen, and a little below it was another cord, somewhat moniliform.

"Now for the dimensions, which are the most astonishing part of the flower. It measures a full yard across; the petals, which were subrotund, being twelve inches from the base to the apex, and it being about a foot from the insertion of the one petal to the opposite one; Sir Stamford, Lady Raffles, and myself taking immediate measures to be accurate in this respect, by pinning four large sheets of paper together, and cutting them to the precise size of the flower. The nectarium, in the opinion of all of us, would hold twelve pints, and the weight of this prodigy we calculated to be fifteen pounds."

The surprise of a naturalist upon first beholding such an extraordinary flower, remarkable alike for its size, as well as its structure and habit, may well be imagined; undoubtedly it was one of the most startling discoveries ever made in the vegetable kingdom. The flower-buds, before opening, are nearly globular, and look like the heart of a very hard close cabbage. These flowers have not a separate calyx and corolla, but they have one floral envelope called a perianth, which is tubular below, and is divided above into five large, red, fleshy lobes, which, as will be seen by the plate, are dotted all over with little light-coloured tubercles. These five lobes of the perianth are united towards the centre, where the whole mass suddenly rises, forming a rim, or corona, two or three inches high; in the midst of this is a deep pit, or tube of the perianth, which is the part Dr. Arnold refers to as being capable of holding twelve pints of water. In the midst of this tube, in the male flowers, a thick fleshy column rises, the base of which is surrounded by projecting rims, and at the top is a flat plate, nearly as wide as the aperture itself; the margin of this plate is usually more or less curled under, and the anthers are sessile, or seated flat upon this curled edge. To all appearances, the female flowers are similar to those of the male. They are alike in size, the lobes of the perianth are similar, as well as the corona, and even the cup or tube; but the difference is in the absence of the anthers, and in place of them the presence of the ovary, which is united to the base of the tube; it has but one compartment, but contains numerous ovules, or undeveloped seeds, arranged along its inner walls. The top of the ovary is surmounted by numerous styles springing from it. These large flowers, frequently measuring over a yard in diameter, are parasitical on the trailing stems and roots of a vine (*Cissus angustifolia*), so that, when the flower is expanded, the large lobes of the perianth cover or hide the place of its attachment to the stem, and the flower thus is to all appearance the entire plant, there being no leaves or other stems. It was first known by its native name of Krûbût, and Dr. Arnold described the soil where it was found as being richly manured by elephants frequenting the locality.

As regards the parasitism of the flower, it seems to originate in cracks or hollow places in the stem or root of the nourishing plant, upon which it soon establishes itself, forming the hard, round buds before spoken of, wrapped in numerous bracteal sheaths; these sheaths or scales, as the flower opens, drop away, and when the flower is fully expanded, few of them are left remaining. The flower takes about three months to come to perfection, it remains expanded for a few days, and then gradually decays, the seeds being mixed up in the pulpy mass. The disagreeable smell arising from the flowers is very probably the means of attracting insects, by the movements of which the fertilization of the flower is effected. At one time these plants were considered to grow only on the roots of the cissus, from which they were classed amongst the Rhizanthæ. A greater intimacy with their habits, however, has shown that they grow upon prostrate stems as well as roots, and that other species of Rafflesia grow upon ordinary stems some feet from the ground. They form a distinct natural order—Rafflesiaceæ. The very accurate investigation into the structure of the plant of Robert Brown, by which its affinities and classification were determined, is one of the many proofs of that botanist's great tact and power of discernment. In this instance he was materially aided by the accurate microscopical drawings of Francis Bauer. Dr. Lindley, in his "Vegetable Kingdom," pays a high compliment to both these workers. He says:—

"Among them (the Rafflesias) is the very remarkable species described by Brown in the 13th volume of the 'Linnæan Society's Transactions,' under the name of Rafflesia, to which those may be referred who are desirous either of knowing what is the structure of one of the most anomalous of vegetables, or of finding a model of botanical investigation and sagacity, or of consulting one of the most beautiful specimens of botanical analysis which Francis Bauer ever made."

Since the discovery of this great flower, three or four new species of the genus have been found, all

natives of Java and Sumatra, and inhabiting the same rich, dense mountain forests. The essential characters of all the species are similar, the chief difference being in the size of their flowers, which are all smaller than those of Rafflesia Arnoldi, so that this flower still holds its place as being the largest in the vegetable world. Plants of Rafflesia Patma have been introduced into some of the Continental botanic gardens, where they have flowered more than once; but the latest discovered species is Rafflesia Rochusseni, named after J. V. Rochussen, Governor-General of Java at the time of its discovery, in 1850. This discovery was made by MM. Teysman and Binnendijk, two Dutch botanists, who safely transmitted living plants, together with the Cissus serrulatus, upon which they grow, to the botanic garden at Leyden.

A singular feature in all the species of Rafflesia is, that the flowers develop themselves at a time when the nourishing plant is devoid of leaves. It was from this fact that Sir T. S. Raffles and Dr. Arnold, before they discovered that the flower was a parasite, described it as being without leaves.

The Rafflesias have no economic use, though in Java the natives consider them to have styptic and astringent properties. Their great interest lies alone in the singular habit and form of their enormous flowers.

MUSIC ABROAD.

FRAU MUSICA, as the Germans style the Muse of whom Bach and Handel, Mozart, Mendelssohn and Meyerbeer were high-priests, has had great cause to complain of the influence exerted by political events, during the last two months, upon her faithful votaries—the Viennese. Her shrines and temples, or, in other words, the theatres and concert-rooms, have been almost deserted. But who could listen to operas and symphonies when, every minute, the notes of the orchestra and the voices of the singers might be interrupted by the cannon of the blue-coated and helmeted Prussian hosts, attempting to force their entrance into Vienna? In fact, considering the precarious posture of affairs for some weeks, it is a matter of surprise that a single place of amusement could be kept open in the capital of the Hapsburgs. But the Viennese are a light-hearted race, and their spirits seem to recover from any temporary shock in the same wonderful manner that the Austrian monarchy itself has risen, on several occasions, apparently as vigorous as ever, after having received what most people have considered its death-blow. The attractions of singers and instrumentalists have revived, and money-takers no longer sit with heaps of cheques, ready to be exchanged for guldens or greasy Government notes, but with no public to complete the desired transaction. Yet there is nothing worth mentioning in the way of novelty to entice the public. *L'Africaine* is still being performed at the Imperial Opera-house, and, what is more, still draws. A slight alteration in the musical bill of fare has been rendered possible by the return of Herr Beck, after a four-months' leave of absence; for "imperial" singers are granted leave of absence just as though they were soldiers in the imperial armies. In former days, "imperial," "royal," "grand-ducal," and "ducal" artists—that is, artists enlisted, no, engaged, as members of the companies at what are called the Court Theatres (*Hoftheater*) in Germany— enjoyed, also, the privilege of being placed under arrest and sent to the blackhole for any dereliction of duty; but, at the present date, discipline in matters theatrical is not carried quite so far. Herr Beck is an immense favourite in Vienna, and created a great sensation by his impersonation of Nelusko in *L'Africaine*. Indeed, the great majority of the Viennese insist that he is the best Nelusko that has yet appeared, and as they have never had an opportunity of seeing and hearing any other, they are, of course, exceedingly competent judges. Herr Beck will re-appear first in Herr Richard Wagner's *Fliegender Holländer*, and then in *Don Juan*. By the way, the mention of the former opera reminds us that another work, *Rienzi*, by the same composer, is to be produced on the Empress's birthday, the 19th November, in grand style, and under the direction of the composer himself. "*Cuando una puerta se cierra, ciento se abren*," says the Spanish proverb. No sooner does it seem probable that, in consequence of the state of affairs, his Majesty of Bavaria may not be able to extend to the "Music of the Future" the welcome he intended, as announced in the July Number of NATURE AND ART, than we find the said "Music" rising into favour at Vienna. However, there is one comfort. Were every day in the year an empress's birthday, and were one of Herr Wagner's operas performed on each birthday, his music would never be more than what it is at present: a proof of the absurdities into which an undoubtedly clever man may be led by some pet theory of his own. If Herr Wagner is right, then all the great masters are wrong; as some quiet gentleman, who is to be found in every lunatic asylum, and who tells you that it is not he but the world who is mad, the victim of a terrible mistake.

The recent public examination of the pupils studying at the Conservatory of Music was highly successful, and bore irrefutable testimony to the excellence of the system pursued at the establishment. The members of the pianoforte-classes, conducted by Professors Ramesch and Schmitt, especially distinguished themselves. Even the youngest proved that they had been taught something more than mere mechanical correctness and dexterity, and that one of the objects to which

their attention had been sedulously directed was the necessity of properly understanding and rendering the spirit, as well as the mere notes, of the composer whose works they were performing. The singing classes comprised many voices on which all the lessons of the best instructors in the world would be thrown away. It is a singular fact, by the bye, that, according to the laws of the Conservatory, only female pupils are taught singing. This is a grave mistake, and may perhaps account, in some degree, for the difficulty experienced in procuring good native men-singers, especially tenors, at the Imperial Opera-house.

As in Vienna, so in Berlin, the war had, at first, a most depressing effect upon the stage and every other branch of art. Most of the private theatres, as opposed to the Theatres Royal, or theatres enjoying a government grant, were placed, so to speak, upon a war-footing, *i. e.* the managers, availing themselves of a clause to that effect in the engagements, discharged all their artists, and then re-engaged, at reduced salaries, only those whom they considered absolutely indispensable to carry on their establishments. The sole private theatre at which this plan was not adopted, but the old engagements observed, was Kroll's. The tone of the public mind—even despite the cholera, which was at first exceedingly severe—soon began, however, to improve marvellously. With every victory of the Prussian armies, it rose more and more, and the staid Berliners grew regularly intoxicated with joy. Of course, this exercised a marked effect upon all matters connected with music and the drama, and the scene which occurred on the opening of the season at the Royal Opera-house was such a one as had never been before witnessed in that building. The performance was for the benefit of the soldiers disabled in the war. The interest taken in the event by the public was enhanced by the fact that the King would visit the theatre for the first time after his triumphant campaign. The house was crowded to suffocation, as a matter of course. Immediately his Majesty appeared in his box, the enthusiasm knew no bounds. The whole audience rose, the ladies waved their handkerchiefs, the men flourished their hats and cheered, and the King kept bowing in all directions. A "Siegesmarsch," or triumphal march, by Herr Taubert, began the performance. Then came, by the same composer, the "Lied von der Majestät," with new words written expressly for the occasion. Three cheers were then given for the King, and the National Hymn demanded, every one standing up and taking part in it. This was followed by Beethoven's C minor Symphony, magnificently executed, and the second act of Meyerbeer's *Feldlager in Schlesien*. The numerous passages in the latter applicable to the late campaign excited tumultuous applause. The performance was brought to a close by Spontini's "Borussia," to which was appended a *tableau*, in which art was again called in to the assistance of patriotism. In an antique hall were the busts of the King, the Crown Prince, and Prince Friedrich Carl. Borussia offered them wreaths of laurel, while groups of warriors gathered around, and the names of the victories, "Nachod," "Skalitz," and "Königsgrätz," appeared in letters of flame. The receipts amounted to nearly 2,000 thalers. This is but one of the many entertainments which have been got up for the benefit of the soldiers who were wounded, or of the widows and orphans of those who fell. The public have liberally responded to the appeals thus made to them, there can be no doubt. Indeed, the Prussians have uniformly shown that, while rejoicing at the great victories achieved, they do not forget those who suffered in their achievement.

The popular French singer M. Roger has been giving a series of performances at Kroll's Theatre. He is a very great favourite in Berlin, and has been so for the last fourteen years, his finished and artistic style making even the most difficult critics his admirers. He has appeared in *Fra Diavalo*, *La Dame Blanche*, *Jean de Paris*, and *Lucia di Lammermoor*.

Now that it is decided that Hanover, Cassel, and Wiesbaden are to form part of Prussia, people ask what is to become of the former Court Theatres in those towns. The theatre at Hanover enjoyed a grant of some 160,000 thalers a year from the ex-King's privy purse, or rather for the public money which found its way thereinto. It could boast, also, of some first-rate artists. Joachim, it will be remembered, was once engaged in Hanover. The Cassel theatre was a very good one. The same, too, is true of that at Wiesbaden, with an annual subscription of 40,000 thalers, all really coming from the gaming-tables, though the Duke and the Town were supposed to contribute a portion. The probabilities are that these theatres will be constituted Prussian Theatres Royal, with a subvention from the State.

According to a letter from Weimar, the Grand Duke Carl Alexander is endeavouring to persuade the "Abbé" Franz Liszt to forsake the Eternal City and once more fix his residence in the pleasant grand-ducal capital. In September, 1863, Liszt was not disinclined to take this step; but now, it appears, there are grave doubts about the matter.

We have examined the "*Sand Nodules*" forwarded to us from King's Lynn, and find them, although by no means as perfect as that described and figured in the last number of "Nature and Art," somewhat like it in formation and structural arrangement. One only had loose siliceous sand in it, and the cavity in which this rested was angular and uneven, as though a rough fragment of siliceous gravel had undergone the process of disintegration, instead of a rounded and water-worn pebble. The others appear to have had no nuclei, being merely rounded concretions, cemented and bound together by the agency of carbonate of the protoxide of iron, the result of the percolation of a solution, probably of the sulphate.

Should any of our correspondents discover more of these interesting substances, we shall feel obliged by their communicating to us the particulars of such discovery.—Ed.

NATURE AND ART

November 1, 1863.]

HOLBEIN IN GERMANY.*

By H. Ward.

PART I. AUGSBURG.

ENGLAND has long regarded Holbein as an adopted son, devoted to her during half his lifetime, and nearly the whole of his career; for he came to London in 1526, and, according to most of his early biographers, he was then only twenty-eight, and resided here until he died of the plague in 1554, being fifty-six years old. This English period of twenty-eight years is brimful of pictures attributed to him; but eleven of the years have been lately cut clean away. In the "Archæologia" for 1863, was published his Will, drawn up on the 7th October, and administered on the 29th November, 1543. Some doubts as to the testator's identity were hinted in the Catalogue of the National Portrait Exhibition of the present year; but the main question has now been settled, by the discovery of a document in the archives of Basle, which is appended to the volume before us. It is the official copy of a letter from the city magistrates to one Jacob David, goldsmith at Paris, summoning him (as being himself a citizen of Basle) to grant testimonials to his apprentice Philip, son "of the late Hans Holbein, deceased" (*von wylandt Hansen Holbein seligen*): this is dated 19th November, 1545. We may, therefore, set aside the old authorities, and accept the very convincing proofs adduced in the "Archæologia," that Holbein died in 1543. Thus his whole residence in England extended over no more than seventeen years; and from these again at least two must be subtracted, as he was actively engaged at Basle in 1529–31. All this seems to give great satisfaction to the Germans, who naturally regard Basle as an outlying portion of Fatherland; indeed, it did not enter the Swiss Confederation till 1501. Moreover, Holbein was not a native of Basle, as we used to believe, but of the right German Free City of Augsburg; and there he painted under his father for years before his migration to Basle, which took place in 1516. Germany thus claims half his career; and an account of it, down to his first departure for England in 1526, is contained in this, the first volume of "Holbein and his Age." We have found it such pleasant reading, and so interesting, though at times fantastic, that we desire to lay a sketch of it before the readers of Nature and Art. For the present we shall stay at Augsburg; next month we shall proceed to Basle; and by that time the *Life* announced by Mr. Wornum will have been published, and we shall then be fully enabled to treat of Holbein in England.

We will commence by playing the showman. It will be observed that our photo-lithograph represents a young man and a sturdy boy of fourteen; the numbers over the head of the latter are very distinct, and so is his name, "Hanns Holbain." The original was drawn with the silver point, and belonged to a series in the first home sketch-books of the boy. It is now one of seventy, preserved at Berlin; twenty-six are at Copenhagen, eighteen at Basle, and others at Weimar, Munich, &c.; but the subjects and inscriptions show that they all came from Augsburg. Some utterly unskilled hand, it will be further observed, has meddled with the features of the boy-artist, but not enough to destroy their character; and the feeble lines of the pen serve at least as a foil to the bold and flowing strokes of the silver point. The boy's companion used to be called his father, but the remains of the inscription show it to be his eldest brother, Ambrosius. The numbers denoting the age of the latter, and the date on the upper verge of the drawing, are now very faint. Dr. Woltmann complains that they are fainter in his own photo-lithograph; and in ours, which is only a copy of a copy, they are fainter still. We cannot, then, seriously contest Dr. Woltmann's readings: the age of Ambrosius, he says, is given as twenty-five, though the face is older; and though the date looks like 1511, yet on closer inspection it proves to be 1509. Thus he decides that Hans Holbein

* *Holbein und seine Zeit*: von Dr. Alfred Woltmann. Erster Theil, mit 31, Holzschnitten und einer Photo-lithographie. Leipzig. 1866.

was born in 1495. Now, 1498 is the birth-year assigned by Walpole and others; but then they rely upon two authorities, both of which are doubtful; the one being the first biographer, Van Mander, and the other an engraved portrait of Holbein by himself, with his monogram, and his age, and a date (H. Ae. 45. An. 1543). Van Mander may be set aside, as he blundered so completely about the place of birth and year of death; and the original of the engraving is lost; so that we cannot judge whether the age and date may not have been inserted by a later hand. Until the dated portrait itself is forthcoming, the engraving may be fairly balanced by a dated altar-screen (æt. 17, an. 1512), which we shall mention presently. Holbein's third biographer, Charles Patin, remarked that he seemed to be prodigiously precocious, and suggested that at least three years' more childhood should be allowed him. On the other hand, it must be noted that his playroom was a studio: the forms of Mediæval art were all around him, and next door to him were those of the Renaissance. His father and uncle were eminent painters of the old school, and his mother was most probably the sister of the greatest German designer of the new school, Hans Burgkmair. At any rate, there was a close intimacy between the two families of Holbein and Burgkmair.

At this epech Ulm and Augsburg were the two head-quarters of Swabian art. Its chief founder, however, Martin Schongauer, had settled at Colmar, where he is supposed to have died in 1499. The familiar designation of *Martin Schön* he may have owed to the beauty of his designs and copper engravings.* He had studied painting under the best pupil of the Van Eycks. He by no means rivalled them in colouring or in manly characterization; his figures, too, are meagre, and his draperies hard and angular: but there is a wild savagery in his fiends, and a winning grace in his angels and Madonnas. His followers at Augsburg vied with him in idealism, until they were influenced by the modern taste and the growing desire for more varied human interest.

"Augsburg is the Pompeii of the German Renaissance." These words of a brother art-critic are quoted and re-quoted by Dr. Woltmann with great gusto. He leads us into the town-hall, and looks out upon the graceful bends of Maximilian Street; and, half-closing his eyes upon the church grandeurs of St. Ulrich, he conjures up the burgher palaces of the seventeenth century, when their frontages were bright with the gay figures of a southern mythology, and the town was like a bonny picture-book. The period of this new style of art was just opening when Holbein was born. Augsburg had always been closely connected with the South by commerce. In the fifteenth century a new impulse was given to its activity; it traded with India through Portugal, and even fitted out vessels for itself. But its chief correspondent was Venice; and thus wealth brought Italian taste with it. There was a showy life in the city, which suited the fantastic spirit of Emperor Max; so that he did not resent the French king's calling him "the burgher of Augsburg." Indeed, he desired to purchase property there; but the real burghers felt some dread of an imperial mate, and persuaded him to be only the guest of the Free City.

Here were cast his splendid arms and his metal statues; and here dwelt Hans Burgkmair, the chief designer of his *Triumph*. He entered heartily into the town frolics, its masques and carnivals, and its highest festival of all—that of the Freeshooters (or volunteers). When he had closed the Diet here in 1518, he turned as he rode beyond the gates, and said: "Now, God bless thee, beloved Augsburg, and all thy kindly citizens. Many a merry cheer have we made in thee. But now we shall never see thee more." On the 12th of the following January he died.

When this poet-emperor was still in his prime, the Holbein family was already well known in Augsburg. Hans Holbein, the elder, and his brother Sigmund, were probably born as well as bred to the brush, somewhere about 1450. The former was soon commissioned to paint for churches and cloisters in other parts of South Germany; and his earliest extant work appears to be an enthroned Virgin at Nuremberg, bearing the date (half effaced) of 1492. It is most delicately finished, like an old Flemish miniature, with a background and framework of Gothic architecture. Further on we shall find that a few works, adorned with arabesques of the Renaissance, used to be attributed to him: they bear the name of Hans Holbein, but are now generally supposed to be by his son. As if the confusion were not enough, some modern critics have started a third Hans Holbein, of Augsburg, and called him the grandfather; but Dr. Woltmann has banished him to the land of shadows. His arguments are stated in a passage (pp. 58–70), which is quite a model of close and shrewd investigation. We have no room for more than a bare indication of his line of arguments. This shadowy grandfather owed his brief existence to two paintings. The first is a *Madonna*, in which the composition is borrowed from Martin Schongauer's *Madonna in the Rose-garden;* but the background, instead of being a hedge of roses, is a gay mountain landscape. It bears this inscription:—"Hans Holbein. C[ivis] A[ugustanus]. 1459." Now, Dr. Woltmann asserts that the letters look very modern; and he proceeds to show that this, if genuine, is the only known instance of the name's being thus spelt by the Holbeins, as long as they lived in Augsburg. The Augsburgers wrote "*ain*," "*hailig*," "Freih*ait*" (instead of *ein*, *heilig*, *Freiheit*), and so also "Holb*ain*." The inscription was first brought to light by cleaning, and *a* might have been easily cleaned into *e*; but so might 9 into 5; and there are other reasons for believing that the true date was something like 1499. The second painting is known as the *Basilica of Sta. Maria Maggiore*, being one

* See the curious remarks on this mysterious *Martin Schön*, and his claims to be considered the earliest engraver on copper, in Lanzi's *History of Painting* (Bohn's Standard Library), vol. i., p. 110.

of a series of six, commissioned by St. Catherine's Convent at Augsburg, representing the Basilicas of Rome, and the legends of their patron saints : it is inscribed "Hans Holbain, 1499." At the foot of the picture appears this monogram, , on a grave-stone. The discoverers of the grandfather have printed an extract from the Convent Annals ascribing this work to "the old Hans Holbein;" a phrase which could hardly apply to the father, whilst young Hans was in his babyhood. But Dr. Woltmann proves that they have depended entirely on a modern transcript, and that the Annals themselves say nothing of the sort. Finally, Hans Burgkmair's father began a list of all the Augsburg artists whom he could remember since 1460; this was continued down to 1548, and it contains only one "Hanns Holbain," namely, Holbein the father; for his son never painted at Augsburg as a *master*. We now take leave of the grandfather, who was actually (it appears) named Michel. His two supposititious works may be transferred to Hans Holbein the father. The second, viz. the *Basilica*, is in three compartments; one of these contains the story of St. Dorothea, how, after yielding her head to the axe, she converted her persecutor by sending him an angel with roses of Paradise.* Her executioner is a figure which we shall presently have to contrast with another in the *Martyrdom of St. Catherine*.

We must linger still, for an instant, among the undoubted works of the elder Holbein. St. Catherine's convent, now the royal picture-gallery of Augsburg, was, in his day, a nursery of high art. When it was rebuilt in 1496, its prioress was Anna Walther; her sister Maria was there as a simple nun; and their father, Ulrich, commissioned the elder Holbein to paint a votive tablet for the whole family : this was accordingly completed in 1502. In the upper division is the *Transfiguration:* the Christ is fine; but the gestures of the three bewildered apostles, especially those of Peter, are almost ludicrous. The lower division is much more remarkable. It represents Ulrich Walther, with a portion of his household—a *portion* only, for when he died (three years later, at the age of eighty-six), he left 133 living descendants. He is here kneeling on the left side, with four pairs of his sons and grandsons behind him; on the other side kneel the prioress and her mother (the former taking the place of honour), and behind them are four pairs of his daughters and granddaughters, and one pair of maid-servants. They are all praying, not merely with clasped hands and bended knees, but with earnest faces; yet their differences of age and character are individually marked. The young women and children are graceful and natural. The artist of such a work, concludes Dr. Woltmann, was worthy of being the father and teacher of Germany's greatest portrait-painter. In religious subjects the elder Holbein had hitherto shown himself a follower, if not even a pupil, of Martin Schongauer, though more or less influenced by the Flemish masters. He now (or not very long after) made a great stride forward. He painted another of the *Basilicas*,—that of St. Paul, filling the three compartments with scenes of the Saint's conversion, and martyrdom, and canonization. The figures, many of them portraits, are very numerous. The bodies and feet are still drawn too meagre; but in other respects, especially in dramatic force, and in the modelling of the hands, the advance is striking; so much so, indeed, that some critics (among others Dr. Waagen) imagine that the elder Holbein must have been assisted by his son. On the other hand, there is an old tradition that three figures are taken from the painter himself and two of his sons; and in one of these, a chubby boy of seven or eight, Dr. Woltmann recognizes the features of our hero. He has presented us with an outline of these figures; and we cannot help believing, with him, that there is truth for once in pictorial tradition. The father brought up his three sons, Ambrosius, Bruno, and Hans, to his own profession; and a little sketch-book of his, preserved at Basle, shows who it was who taught young Hans to use the silver point. It would be interesting to compare the drawings of father and son. We are not enabled to do so for ourselves; from the text, however, we gather that those of the former are characterized by lightness, but indecision of touch; whilst his pupil soon equalled him in delicacy, and surpassed him in vigour.

We are now led back to our photo-lithograph; we wish that it did not stand alone. Dr. Woltmann has given us five more leaves out of young Holbein's sketch-books, but only in the shape of coarse wood-cuts, which convey no notion of the original handling. Still, the heads are full of character. First comes the uncle, Sigmund Holbein, about forty years old, every inch a German artist; earnest and thoughtful, with strongly-marked features, bushy beard, and long hair fantastically dishevelled. Next is a droll, high-shouldered little fellow, trying to look fierce, yet no less than a councillor of the Empire, Kunz von der Rosen : we are not surprised to find that he proved himself alternately worthy of the coat of mail and the motley. The third is the stiff-necked, long-nosed, clean-shaven Jakob Fugger, who helped to found a countship on a silk, wool, and grocery business : his portrait, as a younger man, forms No. 4 of "Imagines Fuggerorum et Fuggerarum," published at Augsburg in 1618. The fourth and fifth are rivals in ugliness; a fat, self-satisfied abbot, and a gaunt good creature of a monk : the latter is an absolute scarecrow; but he evidently would not harm a fly. These heads will some day be photo-lithographed, no doubt, together with many more; and then we can sit down in the circle of young Holbein's friends, as he sketched them (often, perhaps, unawares); or look out with him at a few of the notables of Augsburg, headed by the Emperor Max, now somewhat bowed with years. Before leaving them, we must mention that one of them, Conrad Mörlin, Abbot of St. Ulrich

* See Massinger's *Virgin Martyr*, Act v. Sc. 1. See also Mr. Swinburne's *St. Dorothy*, a lovely poem, half-spoilt by an unsaintly kiss.

at Augsburg, died on the 2nd February, 1510: this gives us some further indication of the date of the earlier drawings.

In 1512 two folding-doors of an altar-screen for St. Catherine's convent were painted inside and out, thus presenting four detached subjects; on the inner side were the Martyrdom of St. Catherine, and the legend of St. Ulrich, the patron saints of the convent and of the city; on the outer side were the Crucifixion of St. Peter, and the Virgin sitting beside her mother St. Anne, with the child standing on the bench between them. The four subjects are now separated, and placed in the Augsburg gallery. The backgrounds are green; the rims are ornamented with golden Renaissance-work, dolphins, horned masks, and winged children sporting among plants, or blowing into flower trumpets. They bear the date, and the name of *Hans Holb.*, but tradition has added to this name the designation of *the elder*. Tradition was flatly contradicted by Dr. Waagen in 1845 (*Kunstwerke . . . in Deutschland*, vol. ii. p. 24). He laid stress upon the fine modelling, especially of the hands, upon the leather-brown flesh-tones, upon the figured draperies, and upon the Italian character of the arabesques. Since this opinion was given, the work has been cleaned, and upon an open book on the knees of St. Anne another inscription has come to light. Dr. Woltmann confesses that he generally distrusts such discoveries; but here, he says, the old-fashioned letters look so very genuine, and they are broken by the sun-cracks so very naturally; in short, the temptation is too much for him. The inscription runs thus:—"Jussu. Vener. Pientque Matris Veroni . . . W . . . E . . . H. Holbain, Aug. ætsuæ xvii."—that is, "by order of the most venerable and pious mother, Veronica Welser, Hans Holbein of Augsburg, in the year of his age 17."

We sincerely trust that the above inscription may be proved legitimate, and may not be finally affiliated upon a cleaner. But, in any case, the paintings were executed under the eye of the elder Holbein, and partly designed by him. There are two sketches by him existing at Basle, for the subject of St. Catherine; in the one she is praying against the torture of the wheel, and the thunderbolt is descending to shatter it; in the other she is submitting to the sword-stroke. The two situations are combined in the painting; the wheel is still in flames, and the executioners are crouching still, all but one, who stands erect, and keeps hold of his prey. As to the details, the following are the principal variations:—The attitudes of the terrified men in the first sketch are strained and angular. One of them, who is raising his elbow as if to guard his head, is a complete caricature. He reminds Dr. Woltmann of the apostles in the *Transfiguration*, above the votive tablet of Ulrich Walther, executed by the elder Holbein. In the painting, on the other hand, there is a young man, screening his eyes with both his hands, whose figure is freely adapted from the sketch, but the caricature is gone. The saint herself, as she appears in the painting, kneeling with folded hands, yet a king's daughter to the last, is a highly refined copy of the second sketch. She is clothed in a rich red mantle and a jewelled hood. The chief headsman is entirely changed. The sketch makes but a poor, unsteady figure of him: he lifts up the sword with both hands; and altogether he resembles the executioner of St. Dorothea, in the *Basilica of Sta. Maria Maggiore*. The painting makes him a stalwart man-at-arms; he grasps the holy princess by the neck with his left hand, his sword-arm hangs down, and he is waiting for the signal of death. Thus, if we may safely follow Dr. Woltmann, at the age of seventeen (the same age that marked the development of Raphael), young Holbein had already begun to outstrip his father in truth and beauty of historical design. In matters of decorative art he had entirely deserted him, and his new taste may not improbably have been formed in the studio of his presumed maternal uncle, Hans Burgkmair, who had returned from an Italian excursion in 1508. The Renaissance ornamentation is considered almost sufficient of itself to decide any rival claims of father and son, in favour of the latter.

One (perhaps the finest) compartment of the altar-screen contains, as we have said, the Virgin and child with St. Anne. The Virgin's mother was now receiving high honours, in consequence of the lately enforced doctrine of the Immaculate Conception; and this group, known as *S. Anna selb dritt* (St. Anne and the other two), had become a general favourite. But young Holbein's treatment of it was new. The two holy women, says Dr. Woltmann, are teaching the child to walk; and he dwells upon the scene with delight. But we have only time to note that the head of the Virgin is almost repeated in another picture, the *Madonna with the May-lilies*. This is a half-figure, scarcely half life-size, standing behind a balustrade. In front of her lies a gold-embroidered cushion, upon which she supports the child with her right hand; and in her left she holds a peach, tempting him to stretch out his arm for it. The child's body is rather too meagre, and his face too old. But the Virgin's head is full of maiden grace and motherly fondness. She has the same features and expression as in *S. Anna selb dritt;* and her fair locks flow in the same waves from underneath a jewelled headband. On the balustrade beside her stands her symbol, the vase of May-lilies. The background is brown, with simple ornaments in the new style; above are two winged genii on a frieze, which is supported on each side by plain pilasters. One of these pilasters is inscribed "Johannes Holbain in Augusta bingewat," the last word being good South German for *pingebat;* and the other—"Carpet aliquis cicius quam imitabitur" (people will carp sooner than imitate). A similar architectural framework incloses the earliest painted portrait by the younger Holbein. But on the balustrade lies a piece of red tapestry, and the background is open to the blue sky. It seems to be taken from a man of importance. He is ruddy, with long florid hair and short curly beard; and in a fur cap and robe. He shows the right hand, but no arm,—an ungrace-

ful arrangement. Otherwise the portrait, which is dated 1513, might have vied in composition, as it does in colour, with Holbein's famous Basle portrait of Amerbach in 1519.

Passing over two portraits (1514 and 1515) and two subjects from the life of Christ, the *Last Supper* and the *Scourging*, we come to a remarkable votive picture. Ulrich Schwarz, a carpenter of Augsburg and a fierce demagogue, had been chosen burgomaster in 1469. He hanged the nobles for a few years, when fortune changed sides, and the nobles hanged him. His martyrdom, as some people called it, occurred in 1478. But the peaceful burghers detested his name, and for many years he was left without any memorial. At length his sons took heart, and this votive picture, it may be presumed, was hung over the family vault. In the centre is Ulrich Schwarz storming heaven with prayers. The dead as well as the living are ranged on either side of him; his three wives, and thirty-one children and grandchildren, all uniting in the Litany of the Dead. Above them, and above the clouds and cherubim, is God upon the throne: the great sword of justice is in His hand, but He is sheathing it; for Christ and his mother have joined in the appeal for mercy, the one displaying his wounds, and the other her breasts. Their gestures may be theatrical, perhaps, yet they are forcible and pathetic, and manifestly studied from life. The Virgin, no longer the beautiful commonplace of early art, is a real woman, with expressive, though somewhat irregular features; her hands are too powerful to be quite feminine, but they are admirably modelled. Forms of such passion and grace, says Dr. Woltmann, had been hitherto almost unknown in Germany. But most interesting to us, he continues, is the head of the Almighty: we have seen it before, as that of the crucified Peter, on a compartment of the altar-screen of St. Catherine's; and we shall see it again, as that of a sympathizing spectator, in the *Martyrdom of St. Sebastian*. Of its profile there is a silver-point drawing at Berlin, belonging to the Augsburg sketch-books. And we venture to identify it with the head engraved in Sandrart's *Deutsche Akademie*, as the portrait of Holbein the elder. In all of these the leading features are the same: the outlines of the nose and cheeks; the contraction of the brows; and the remarkable forehead overshadowing the eyes. This head reminds us also of the self-portrait of the elder Holbein, in the *Basilica of St. Paul;* but the lapse of a full decennium has sharpened his features and furrowed his brow, and turned his flowing brown locks and beard into a silvery grey. The young artist could find no better type for his heavenly father than this idealized portrait of his earthly father.

On the pommel of the sword of Justice in the hand of the Almighty, is a monogram, , the earliest example of any used by the younger Holbein.

We shall be extremely curious to see how far Mr. Wornum's book will confirm the truth of these descriptions and conclusions. If Holbein was not born before 1498, he could hardly have worked independently at the altar-screen of 1512; in which case his father, when an elderly man, must have mastered an entirely new style of ornamentation. This is by no means impossible; for the artist of the *Basilica of St. Paul* was clearly a man of progress; and from his sketch-book we learn that on one occasion, at least, he executed a commission more archaically than he had designed it. He may have adapted his ornamentation, in like manner, to the taste of his patrons; and restrained his own taste for the new style, until it had become popularized by Burgkmair. But at any rate, these paintings are closely connected with the student days of the younger Holbein. Next month we shall see him formally admitted, at Basle, into the guild of the Master Painters. But, meanwhile, he is said to have left at Augsburg what may be termed his diploma picture, the *Martyrdom of St. Sebastian*. But this, again, is a subject of contention. We have barely left ourselves space for any account of it. Moreover, this volume presents us with a woodcut, which acts as a strong antidote to the raptures of the text. We should say that the pictorial saint has suffered more from the graving-tool than the legendary saint ever did from the arrows. Still, we can discern a certain beauty in his attitude; he stands, nearly naked, in front of a tree, with his right wrist fettered to the stem above his head, and his left arm bound down to the stump of a branch by his side: there is just enough left here to suggest a fine original, with classic lines in his upper body. His legs, however, are absolutely infirm; and there are a few other symptoms of the artist's not having yet escaped from the old school. The archers are all in Mediæval costume; one of them, a kneeling figure with an arrow between his teeth, wears the livery of Bavaria, the traditional enemy of the Free City of Augsburg; and another has a cock's feather in the cap over his sinister face, which strangely recalls Dr. Waagen's descriptions of pictures by the elder Holbein. The group, whoever designed it, is full of animation: that the son had a hand in it, we might almost take for granted; and this is confirmed by four of the sketch-book leaves at Copenhagen, containing studies for the Martyr and his executioners.

But he was now about to work by himself: there is no reason to suppose that his father accompanied him to Basle. As only one "Hans Holbein, painter," occurs in the registers of Augsburg, so also one only occurs in those of Basle. There was, indeed, another Holbein admitted into the Painters' Guild at Basle; but this was Ambrosius, the same whom we see, as a young man, on our photo-lithograph, and who had hitherto remained peacefully at home, for aught we know. But young Hans Holbein, as soon as he began to feel the fulness of his strength, longed to prove it to the world; and so, in 1516, he set out for Basle, taking, as it were, his elder brother with him.

CONCERNING SNEEZING.

By the Rev. W. Houghton, M.A., F.L.S.

SNEEZING may be popularly defined as a spasm due to an irritation applied either directly or indirectly to that portion of the Schneiderian * membrane, which is the expanded distribution of the olfactory nerve, the seat of the special sense of smell. The complex phenomena of "reflex action" are also involved in the act. The irritation may be caused directly, as by snuff, and so forth; or indirectly, as by the sudden impression of light upon the retina, or by the well-known effect of a sudden chill.

Probably there are few people in England—perhaps I may say in the world—who pass a single day without one or two occasional sneezings. There is no doubt much difference among individuals in this respect. Much, too, depends upon the season of the year; a person will, generally speaking, sneeze more in the summer than in the winter, on account of the glare of the sun, and a more pulverised condition of the road. Not a few suffer from the very unpleasant affection called "hay-fever," which is characterised by a troublesome itching of the eyes, and great irritation of the membrane lining the nasal passages, producing constant sneezing, and a general constitutional disturbance. The numerous minute particles of the pollen of grasses and other plants from the meadows are distributed by the air and conveyed to people's nostrils, which immediately reply to their presence by a fit of sneezing. The dust and smell arising from a hay-field are eminently productive of these disagreeable sensations, and hence the name of the complaint. There are some people, however—but not such as are affected with "hay-fever"—who are rather pleased than otherwise with the preliminary titillation of the mucous membrane of the nose with its natural result, at which the whole frame shakes convulsively. And then a person may be taken with a fit of several consecutive ebullitions at most inopportune moments. It must be rather awkward for actors sometimes when, in the midst of some solemn declamation, the unwelcome sneeze gives warning of its approach. Imagine Hamlet, at the end of the well-known words,

> "O that this too, too solid flesh would melt,
> Thaw, and resolve itself into a dew,"

to be seized with a paroxysm of sneezing! Would not the audience fear lest those violent sternutatory agitations should prove the prelude to that much-wished for consummation?

But what is sneezing, and how shall we define it? Etymologically the word has reference to the *nose*, the Anglo-Saxon *noese*, the German *nase*, the Latin *nasus*, &c., hence the word used to be written without the initial "s," as "neesing" or "neezing," and Shakespeare—

> "And then the whole quire hold their hips and loffe,
> And waxen in their mirth, and *neeze*, and swear
> A merrier hour was never wasted there.
> (*Midsummer Night's Dream*, act ii., sc. 1.)

Mr. Hensleigh Wedgewood thinks that the name of the nose is taken from an imitation of noises made through that organ. Similarly, Webster defines the noun sneeze to be "a sudden and violent ejection of air, chiefly through the nose, with an audible sound." But this is manifestly incorrect, for the ejection of air is always normally through the *mouth*. Let any one, when threatened with a sneezing fit, keep his mouth closed, so as to compel the expulsion of air through the nostrils, he will find the operation extremely unpleasant, and will not care to repeat the experiment. However this may be, it is certain that the irritation in the nose is the primal cause of the sneeze, and therefore the words nose and (s) neeze stand in close relationship one to the other. Sneezing may again be defined to be a spasmodic effort to get rid of any causes of irritation which affect the lining membrane of the nose, such effort being accompanied by a violent ejection of air chiefly through the mouth. Sneezing may be symptomatic of disease, as in the case of common catarrh, measles, but alone it can never be depended upon as a diagnosis of disease.

The ancients attributed various properties to the act of sneezing, amongst which may be especially mentioned that of stopping hiccups. There is rather an amusing passage in the Symposium of Plato on this subject. It appears that Pausanias, one of the party, had done speaking, and that it was Aristophanes's turn next to address them; but unfortunately this latter individual was seized with a bad fit of the hiccups,—probably brought on from eating too much dinner (*ὑπὸ πλησμονῆς*,)—and he was unable to talk; whereupon he turns to Eryximachus, a physician, who sat just below him, and addresses him: "Eryximachus, you ought either to stop my hiccups or else to speak in my turn, until I can cure them." To which Eryximachus replied, "I will do both; I will speak in your turn, and when your hiccups have ceased you shall speak in mine; but while I am speaking, if by your holding your breath for a long period, your hiccups cease, all right; if not, gargle your throat with water; if they are very violent, take something of this kind with which you can tickle your nostril and sneeze; if you repeat this once or twice the hiccups will cease, be they ever so violent." * Aristophanes

* The mucous membrane lining the nasal fossa sometimes called pituitary, receives this name from Schneider, who was the first to show that this secretion was due to the mucous membrane, and did not proceed from the brain as had previously been supposed.

* Sympos. 185, D.

applied the remedy, which he says he found a perfect cure.

Every one is acquainted with the custom of saluting a person who has sneezed, with the expression, "God bless you!" It is very interesting to trace, as we often can do, existing customs up to very remote periods; and it is certain that the custom of blessing persons when they sneeze is of great antiquity, and that sneezing has been pretty generally considered ominous amongst nations. As early as the time of Homer, sneezing was regarded in this light; accordingly we find that after a speech of Penelope in the xviith book of the Odyssey, Telemachus "sneezed aloud" (*μέγ' ἔπταρεν*), which was considered a happy omen. Eustathius on this passage observes that sneezing to the left was unlucky, but lucky to the right. Aristotle * asks many questions about sneezing; amongst others, why sneezing from midnight to mid-day are considered to be unattended with a good omen, but those which take place from mid-day to midnight are considered to be attended with a good omen? While Xenophon was uttering an important speech to his soldiers, somebody sneezed, whereupon this was considered a good omen from Jupiter the preserver, and all sacrificed to the god.† Plutarch tells us that when Themistocles sacrificed in his galley before a certain battle, and one of the assistants upon the right-hand sneezed, Euphrantides, the soothsayer, presaged the victory of the Grecks and the overthrow of the Persians. If the god of love sneezed on the right all would go well with lovers; thus Catullus (Carmen xlv.):

> "Hac ut dixit, Amor, sinistra ut ante,
> Dextram sternuit approbationem."

Theocritus (Id. xviii.) in the Epithalamium of Helen, thus addresses the newly married Menelaus:

> "Thrice happy bridegroom! on thy way 'tis clear
> Good demon sneezed, that only thou should'st gain
> The prize so many princes would obtain."

As to the custom of blessing persons when they sneeze, some have supposed that it had its origin from a disease that prevailed in the time of Gregory the Great, which, it is said, proved fatal to those who sneezed; hence the expression, "God bless you!" Nothing, however, can be more certain than that the custom dates from a time long antecedent to Gregory the Great. Pliny, in a very interesting chapter on customs, asks the question, *cur sternutamentis salutamur?* "why do we salute sneezings?" and tells us that Tiberius Cæsar, the most morose of men (*tristissimum ut constat, hominum*) used to observe this custom even when riding in his chariot. Now that we are quoting from Pliny, we may as well mention that he states it is the opinion of some that in order to cure the hiccups, it is a good plan to shift the ring from off the left hand to the longest finger on the right, and to plunge the hands in hot water. It is curious that shifting the ring is still considered amongst ourselves as one of the popular cures for hiccups. But to return to sneezing. C. Petronius, a voluptary at the court of Nero, writes as follows:—

> "Gyton collectione spiritûs plenus, ter continuò ita sternutavit at grabatum conculeret, ad quem motum Eumolpus conversus, Salvere Gytona jubet."

There is a very amusing epigram in the Greek Anthology, on a man who had a nose so long that he could not hear himself sneeze. (The Greeks were of the same opinion as some of the moderns, that the sound proceeded from the nose.)

> "Proclus with his hand his nose can never wipe,
> His hand too little is his nose to gripe;
> He sneezing, calls not *Jove*, for why? he hears
> Himself not sneeze; the sound 's so far from 's ears."

The Rabbinical account of saluting a person when he sneezes, is most curious. I will give it as I find it in Buxtorf's "Lexicon Chaldaicum et Talmudicum" (p. 1,599):—

> "Since the day of the creation, every man who sneezed always died of his complaint; wherever he was, whether in a journey or in the market, if he sneezed his life immediately went from him; but when Jacob came, he asked God's pity on account of this thing, and besought him thus: 'O Lord of the world, take not away my life from me before I have admonished my sons and my grandsons.' And God granted his petition. Now, when all the kings of the earth heard of this, they trembled and were disturbed, for such a thing (as a man sneezing and not dying) had never happened since the creation of the world. On this account a man when he sneezes is compelled to give God thanks for having brought him from death to life, as it is written, 'His sneezings make light to shine' (Job xli. 9.) So far Chaskuni. . . . Before the time of Jacob a man sneezed and died; afterwards they said to a person sneezing, *chayim lobim*, that is, 'good life to you.'"

Brand, quoting an extract from the "Gentleman's Magazine," says:—

> "The year 750 is commonly reckoned the era of the custom of saying 'God bless you,' to one who happens to sneeze. It is said that in the time of the pontificate of St. Gregory the Great, the air was filled with such a deleterious influence that they who sneezed immediately expired. On this the devout pontiff appointed a form of prayer, and a wish to be said to persons sneezing, for averting them from the fatal effects of this malignaney. A fable continued against all the rules of probability, it being certain that this custom has from time immemorial subsisted in all parts of the known world. Aecording to mythology, the first sign of life Prometheus's artificial man gave was by sternutation. The supposed ereator is said to have stolen a portion of the solar rays; and filling with them a phial whieh he had made on purpose, sealed it up hermetically. He instantly flies back to his favourite automaton, and opening the phial, held it close to the statue; the rays still retaining all their activity, insinuate themselves through the pores, and set the faetitious man a sneezing. Prometheus, transported with the sueeess of his machine, offers up a fervent prayer, with wishes for the preservation of so singular a being. His automaton observed him, remembering his ejaculations, was very careful on the like oecasions to offer their wishes in behalf of his descendants, who perpetuated it from father to son in all their colonies."

But though sneezing was at one time considered a mortal distemper, it was also regarded as a sign of recovery from diseasc. Hence, in the account which relates the raising to life again of the Shunammite's son, in 2 Kings iv., the child, it is said, sneezed seven times and then opened his eyes.

* Problem xxxiii. ΟΣΑ ΠΕΡΙ ΜΥΚΤΗΡΑ.
† Xen. Anab. iii. 2, § 9.

In Howel's Proverbs occurs the following sentence: "He hath sneezed thrice, turn him out of the hospital;" he is nearly well again.

The following translation of some old Latin verses occurs in "The Schoole of Slovenrie, or Cato turn'd wrong side outward, translated out of Latine into English verse, to the use of all English Christendome, except Court and Citie":—

"When you would sneeze, shalt turn yourselfe into you neibour's face,
As for my part, wherein to sneeze, I know no fitter place;
It is an order, when you sneeze, *good men will pray for you;*
Marke him that doth so, for I thinke he is your friend most true.
And that your friend may know who sneezes, and may for you pray,
Be sure you not forget to sneeze full in his face alway.
But when thou hear'st another sneeze, although he be thy father,
Say not *God bless him*, but *Choak up*, or some such matter, rather."

Various amusing accounts have been given by travellers of this custom of saluting sneezers in different parts of the world. Whenever the King of Monomotapa (Sofala) sneezed, it was known to thousands of his subjects.

"Those who are near his person," says Disraeli in his "Curiosities of Literature" (p. 45), "when this happens, salute him in so loud a tone, that persons in the anto-chamber hear it, and join in the acclamation; in the adjoining apartments they do the same, till the noise reaches the street, and becomes propagated throughout the city, so that at each sneeze of his majesty results a most horrid cry from the salutations of many thousands of his vassals."

The Siamese are said to have a custom of saluting persons who sneeze, and wishing them a long life.

"For they believe that one of the judges of hell keeps a register wherein the duration of men's lives is written, and that when he opens this register and looks upon any particular leaf, all those whose names happened to be entered on such leaf never fail to sneeze immediately."

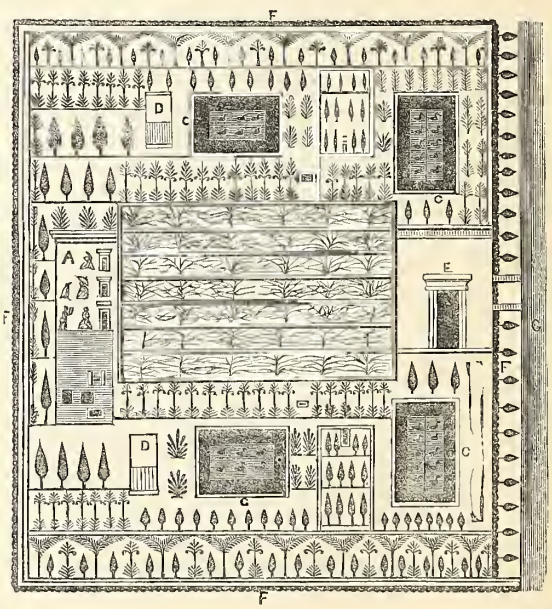
What animals besides man are subject to this little annoyance? Dogs and cats certainly, and probably others of the canine or feline tribes. Is the lining membrane of the elephant's proboscis sensitive to irritating particles, so as to induce a fit of sneezing in this mighty pachyderm? Speaking of dogs, I am reminded of what Horapollo tells us, viz., that when the ancient Egyptians would denote the spleen, or smelling, or laughter, or sneezing, they depict a dog, "because the thoroughly splenetic are neither able to smell, nor laugh, nor sneeze"—a piece of Egyptian logic which only those who have been initiated in the "hidden wisdom" of the hieroglyphics are able to appreciate.

GARDENING IN CONNECTION WITH ARCHITECTURE.

By J. B. Waring.

NATURE and Art can never be more happily combined than in some noble building whose gardens, groves, fountains, avenues and park, harmonizing with it and forming, as it were, a setting to the jewel, evince that taste in design and sense of fitness in the accessories which lend such a peculiar charm to some of the fairest palaces and mansions of Europe.

The art of landscape gardening is of comparatively modern origin. Although we have drawings still preserved to us of Egyptian gardens in the antique past (of which the accompanying illustration * may serve to give some idea); and although ancient Assyria with its hanging gardens of Babylon,



Rome with its gardens of Lucullus, Persia with its "paradises" and celebrated Royal gardens at Shiraz,

* This hieroglyphical design copied (but not the reference letters which we have added) from Sir Gardner Wilkinson's "Manners and Customs of the Ancient Egyptians," and by him from Professor Rosellini's work, shows the outline of an Egyptian mansion, built about an inner court containing a vineyard, and having an extensive planted and walled enclosure round three of its sides.

A. Is an elevation of the part of the building that looked inward. The design shows three stories, and that the roof was ornamented with plants.
E. Is the elevation of the grand doorway.
F F F F. An embattled wall, which looked, through an avenue of trees, on to the river.
G. A canal or river.
C C C C. Are ponds in the park or gardens. Ducks or geese are depicted upon them.
D D D. Are kiosks or summer-houses.

and even Tartary, whose sovereign Timur Beg (Tamerlane) built a splendid palace in the *Bâghi-dilcusha*, or "garden which rejoiceth the heart," all prove that the art of gardening in combination with architecture is innate in man, and is of the highest antiquity;—still, for us people of modern Europe, the art may be said to have had its origin, to have been systematized and developed in a truly grand manner during the sixteenth century. Italy took the lead, not only in the formation of gardens for the growth of remarkable trees and plants, but also in the adaptation of the ground, and the addition of artistic accessories, for the purpose of giving to them an architectural character in combination with the natural beauties of the site. At that time Italy set the fashion to other countries. France speedily followed in the same track, nor did our own country lag far behind, for in the gardens at Nonsuch Palace, laid out about the year 1540 for Henry VIII., we read of "shady walks, columns and pyramids of marble, fountains that spout water one round the other like a pyramid, upon which are perched small birds that stream water out of their bills." These were among the *concetti* in which Mediæval and Renaissance Europe took delight, but in the succeeding century such puerilities gradually gave way to a more purely artistic and refined taste. They were justly disregarded; for, as Lord Bacon said of different coloured patterns, "You may see as good sights many times in tarts." And we smile when the Rev. J. Cradock tells us of a Dutch garden at Saardam, in which he saw a table and punch-bowl, with pipes, cut out of evergreens, and a famous stag, whose antlers were always growing. This, however, relates to the *ars topiaria*, of which we shall have more to say anon.

In the seventeenth and eighteenth centuries, some of the most magnificent results of what may be called architectural gardening were achieved; grand examples of which still are preserved to us, and demand our admiration, not only from the extensive scale on which they are carried out, but in many respects for the art evinced in their design. Such are the great gardens of the Pitti Palace and the Bellosguardo, at Florence; the gardens of Pratolino, of the Pamphili Doria Palace, Rome; of Caserta, near Naples; of St. Cloud and Versailles —both from Le Nôtre's designs,—St. Germain en Laye, the Luxembourg Palace, and Fontainbleau, in France; Schönbrunn, near Vienna; the Belvedere, Potsdam, and Charlottenburg, near Berlin; Loo, Ryswick, and the Hague in Holland; the old parts of Blenheim, Chatsworth, and Stowe, and Hampton-Court gardens and park, laid out by London and Wise, for King William III. At the latter place, however, the small garden was probably made in Wolsey's time, and affords many examples of Bacon's precepts. To our mind, these gardens with their alcoves, statues, terraces, and fountains, are charming, and full of delights, despite the somewhat monotonous character of their mathematical regularity. It must still be admitted, that Nature was then too little thought of, and Art too much. As Horace Walpole remarked:—

> "The measured walk, the quincunx, and the *étoile* imposed their unsatisfying sameness on every royal and noble garden. Trees were headed, and their sides pared away. . . . In the garden of Marshal Biron, of Paris, consisting of fourteen acres, every walk is buttoned on each side by lines of flower-pots, which succeed in their seasons."

In spite, however, of such criticism, and the clever author's sneers at fountains, which toss "their waste of waters into air in spouting columns," and at "terraces hoisted aloft in opposition to the facile slopes that imperceptibly unite the valley to the hill," we still see much to admire and love in these well-ordered gardens and the works of art, more or less suited to rustic scenery, with which they are adorned.

A building, we must remember, is entirely a work of conventional art, and the ground more immediately in its neighbourhood should also be treated in a more or less conventional manner, in order to harmonize with it. But Fashion is proverbially fickle, and the witty and sarcastic Horace Walpole was in his day her *arbiter elegantiarum*. Bridgman commenced a reform, and Kent, the architect and *protégé* of another *arbiter*, the Earl of Burlington, brought new principles to bear on the art of landscape gardening. Nature and breadth of effect were his guides. "The great principles on which he worked," writes Walpole, "were perspective, and light and shade." Wild Nature now became more the vogue, to the disregard and disuse of the Arts. "Capability Brown" came to the throne, and Walpole, speaking of Warwick Castle, says, "It is well laid out by one Brown, who has set up on a few ideas of Kent and Mr. Southcote." Whilst Cowper in his "Garden," sings of him thus:—

> "Lo, he comes!
> Th' omnipotent magician, Brown, appears!
> Down falls the venerable pile, th' abode
> Of our forefathers, a grave whisker'd race,
> But tasteless. Springs a palace in its stead.
> He speaks. The lake in front becomes a lawn;
> Woods vanish, hills subside, and valleys rise:
> And streams, as if created for his use,
> Pursue the track of his directing wand,
> Sinuous or straight, now rapid and now slow."

This well describes the new style of landscape gardening, which consisted in torturing and twisting Nature into something as different to herself as might please the fancy of "Capability" Brown, so called because his first remarks were always as to the "capabilities" of the ground placed under his moulding power. Nature here was denaturalized, and the Arts as applicable to Nature almost clean forgotten. A more tasteful sense of Nature in landscape gardening was inculcated by the succeeding school, of whom Sir Uvedale Price may be said to have been the founder. The "English garden" by this time had become naturalized abroad and was looked upon as the acme of good taste; and, in so far as it aided or improved on natural features, and sought picturesque effects, it deserves some credit. But in all this, Art, and especially architectural art, as forming an important feature in the

gardens belonging to large buildings, fell comparatively into disuse.

In our own time we have seen an attempt at this revival of Art and Nature in combination, in such works as the gardens at Sydenham, and at South Kensington; and, although the former are immeasurably the best of the two, yet such a want of good taste, and a poor appreciation of Art, as suitable to Nature, is observable in each, that we have been induced to make some remarks on this most interesting subject, of which the above opening sketch of the rise and progress of the practice in Europe, will serve as a useful introduction.

Among the various qualities required in an architect, as enumerated by the too exacting Vitruvius, we are not aware that a knowledge of landscape gardening forms one. And yet, most assuredly, if there is one subject in which the educated and accomplished architect should be skilled and trained, it is a taste for, and knowledge of, the capabilities of the country or ground on which his building is to be placed, and with which it will henceforth be inseparably connected, seen, and judged of. First of all, the *site* of his building demands artistic consideration; then its congruity with the surrounding scenery must also be thought of; and, finally, the ordering of the garden, so as to be in harmony with the entire work, should clearly devolve upon the designer of the principal piece, to which it forms an adjunct of the most important character. For want of all this, what miserable failures have we seen in our own day, and among persons who pride themselves on their artistic ability as architects. To take one only example from amongst numbers, we have the most important building of modern times in London, the Houses of Parliament, not raised—for such an expression would be inappropriate,—but sunk almost out of sight; not springing from a broad and high platform by the river's side, but squeezed up, and pressed down into its muddy ooze, so as to constitute to all time the most expensive possible example of how a bad site can entirely destroy the effect of a noble building. In this particular case we believe the architect was not to blame. As regards the next point, congruity of character between the neighbourhood and the building, there are certain associations of ideas which must not be neglected. The many-roofed castle, with its outline, jagged as the rocks on which it is perched, will not harmonize with gentle streams or green sweeps of fat pasture land, the home of plenty and of peace. There is such a thing as being too picturesque, and that is the rage at the present day, when villas which wilfully set all uniformity at defiance, and painfully seek eccentric irregularity, appear suited neither for domestic comfort nor for the soft, calm beauty of the woods and fields in which they are placed. On the third point, that in which Nature and Art are principally interwoven, we think it advisable to consider each separately, and will take as our well-beloved guide Francis Bacon,[1] who, in his two delightful essays "On Building" and "On Gardens," has laid down rules, and made suggestions which every lover of Nature and of Art should hold dear. It is not our purpose to enter into the description of a country-house. We merely premise that we fully endorse Lord Bacon's dictum that on the upper story should be "an open gallery upon pillars, to take the prospect and freshness of the garden." This we find in several of our old Elizabethan mansions, which with their large and deep bay windows, open galleries, spacious courts, clear fountains, and broad terraces, are models of English country-houses. With respect to the immediate neighbourhood of the building, he adds,—"You must have, before you come to the front, three courts; a green court plain, with a wall about it; a second court of the same, but more garnished with little turrets, or rather embellishments upon the wall; and a third court to make a square with the front, but not to be built, nor yet inclosed with a naked wall, but inclosed with terraces leaded aloft, and fairly garnished on the three sides; and cloistered with pillars, and not with arches below." We need hardly say that this applies only to palatial buildings. The principle, however, remains good and ought to be practised, namely, that the main building should be gradually united by architectural features with the grounds and surrounding country. As for the ordering of the garden, in which, as he beautifully says, the breath of flowers "comes and goes like the warbling of sweet music," he advises that a large plot of some thirty acres (which in his time was considered about the quantity of land required for a palatial mansion), should be divided into three parts, according to the fashion of the period. "A green in the entrance; a heath or desert in the going forth, and the main garden in the midst, besides alleys on both sides; and I like well, that four acres of ground be assigned to the green, six to the heath, and twelve to the main garden." It is an injustice to the author to give meagre extracts from his delightful description of the manner in which these three plots of ground should be planted and arranged: whoso loves a fine garden, should read and study the essay for himself.

We will proceed to consider the various parts and features of a garden, to which architectural or ornamental art can be best applied. And first of all for terraces. We hold it as a reasonable and good principle that every house should be raised, where possible, upon a platform; for, to make it stand flat on the ground, as though it had been shoved up bodily through the earth, or placed down haphazard upon it, like the *santa casa* of Loreto, is opposed to that Art which should connect itself agreeably with Nature. It is extraordinary what value a raised platform, however small, gives to a building. Descending from this by a few steps we come to the terrace itself, which we hold should be broad, and furnished with wide walks, large velvety grass-plots, and beds of the sweetest flowers, near enough at least to scent the air and be wafted on the breezes into the house itself. This terrace should not be too straight, or it becomes monotonous and tame, however grandly carried out, as at

Alton Towers, for instance, and as at the Pamphili Doria Palace, near Rome. Circular bastions, with fountains, statues, and flower vases on the balustrade, give additional charms to this the first, and perhaps the only terrace in the grounds. Indeed, too many terraces are to be avoided; and in the "Theory and Practice of Gardening" translated from the French (of Leblond), by S. J. James, 1712, a work of great interest to the planners of gardens, it is observed that "by means of levels or flats (*plein-pieds*), continued as long as the ground will permit, you should endeavour to avoid the defect of heaping "terrass upon terrass." Loudon, in his valuable "Encyclopædia of Gardening," justly remarks that this terrace serves to unite the house with the grounds, and should, whenever practicable, be introduced into the design of the building of which it forms almost a component part. For ourselves, we love a fine terrace, and whoso knows Haddon Hall, must know also its special charms.

As regards the terrace-stairs, these may be winding or angular rather than parallel with the terrace itself, with broad treads and pleasant landings at every seventh step or so. The most easy ascent of stairs we know of is that of the Vatican, which are barely 6 in. high, with a tread of 1 ft. 8 in. If possible, we would have also a *tapis-vert* terrace well sheltered on the north and east by trees. The green carpet may be planted with odorous herbs which give their scent out when pressed by the foot, as Bacon advises: the external fence of this terrace may be also a well-clipt, low hedge—for want of this, the fine terrace at Lowther Castle, Cumberland, looks unfinished, and is even dangerous for children: *one* terrace-walk also we would always have paved, as it is not so damp as gravel after rain.

Adjoining both house and terrace, should be the greenhouse. "Who loves a garden loves a greenhouse too," sings Cowper, in his charming poem "The Garden;" and we need hardly add that it should be so designed as to form a promenade in bad weather, and always be connected with the house itself, so that it may be reached under cover. This feature in a garden has now been brought nearly to perfection, and splendid examples will occur to us all in the South Kensington Gardens, and in the winter-garden at Sydenham. The plant-houses at Kew are unfortunately greatly overcrowded, but this is, probably, unavoidable. Returning again to the garden, we will now speak of the additional beauty it derives from the presence of water—which is the very life and soul of pleasure-grounds. We agree heartily with Lord Bacon, that "for fountains, they are a great beauty and refreshment, but pools mar all, and make the garden unwholesome and full of flies and frogs." Great waterworks, such as those of Versailles, Sydenham, Chatsworth, &c., are by no means necessary to perfection in forming a garden; indeed, we consider such *tours de force* as only fitted for vulgar parade. The expense of making them is enormous, and the result, as regards beauty, *nil*; whilst the pipes, if left protruding out of the water, like the ends of so many dirty sticks, as at Sydenham, injure the look of the whole fountain. If possible, all standing water, whether in the basins of fountains or in lakes, should be avoided. We have seen beautiful grounds, like those at Arundel Park, for instance, ruined by the nasty, green, slimy surface which will collect on standing pools or where the current is not kept pretty strong, and, even then, it requires to be carefully watched and cleared away. These lakes are nuisances, with their wretched little boats, and muddy-tasting fish. Avoid artificial lakes and useless canals like those at Hampton Court, or, if you must have standing water, see that it is kept in such well-lined basins or reservoirs as shall admit of its being easily cleaned, and which will keep it clear as long as possible. "Such a reservoir which," says Bacon, "we may call a bathing-pool, admits of much curiosity and beauty, wherewith we will not trouble ourselves; as that the bottom be finely paved and with images; the sides likewise; and, withal, embellished with coloured glass (mosaics), and such things of lustre; encompassed also with fine rails of low statues." Of this kind is the large oval reservoir, called the "Isola bella," in the Boboli Gardens at Florence, with its central marble fountain of Neptune and water-nymphs, surrounded with low, sweet-smelling shrubs and flowers. Another example of the same class, with a central raised terrace, is to be seen in the public gardens at Nismes. As for fountains ornamented with glass mosaics, the only architect who ever carried out Bacon's suggestion, so far as we know, is our excellent friend Professor Lewis, of the London University, whose beautiful fountain in the old Panopticon (now the Alhambra) is unfortunately destroyed. The ornamental adjuncts of fountains should be always appropriate: one of the best and most fanciful of its kind is that by Tacca, in the Piazza Annunziata, Florence. Such works, however, are only for the gardens of the most wealthy; but, as a rule for these and for all, we would say, keep the water ever flowing. And one way in which it may be very prettily conducted, from a higher to a lower stage, is by means of *goulettes*, which James explains as "small channels cut in stone or marble, laid sloping for the water to run in, which is now and then interrupted by little basins, cut in form of shells, which throw up small spouts of water:" we would, however, dispense with the jets, which appear unmeaning and trivial. Some of the most beautiful fountains in Italy, as, for example, that "Della Rocca" at Viterbo, are on a raised platform ascended by steps which greatly add to the appearance of the design.

The old system of waterworks is now, happily, quite gone out of fashion. At Chatsworth in the olden time, a multitude of little fountains suddenly spouted out over the incautious stranger who stood in admiration of the great cascade, and wetted him to the skin. This great cascade appears to have been of the same class as that at St. Cloud, which is built in stone terraces, each with its vases, and the whole body of water empties itself into a large oval beneath. This piece, designed by Le

Nôtre, is a fine example of its kind, but we need hardly say is now properly out of vogue. Among the more useful applications of water, the system practised in the gardens of the Generalife at Granada, is very good and pleasing. In that torrid climate of Andalusia, the plant and flower-beds are interwoven with small swift-running streams of water, in pebbled channels, which here and there are enlarged to form fountains. The effect of sound and sight as you look out from the lovely Moorish arcade of the palace is exquisite. Resembling in this respect the garden of Alcinous as given in Homer's "Odyssey," thus rendered in the *Guardian*, No. 173 :—

> "Two plenteous fountains the whole prospect crown'd ;
> *This*, through the gardens leads its streams around,
> Visits each plant, and waters all the ground :
> While *that* in pipes beneath the palace flows,
> And thence its current on the town bestows."

Floating islets of flowers may also well be placed in water, as we have seen in the river at Taunton, Somersetshire, where the effect is exceedingly pretty :—

> "A little lawny islet
> With anemone and violet,
> Like mosaic paven."

As Shelley sings ;—or, better still are mounds of beautiful colour and sweet fragrance studding the calm surface of the water. Statues, vases, water, and flowers, form an exquisite combination; and, as regards water-plants, these also are not without their charm, but they require great care, and are often too dependent on a muddy bottom to be altogether desirable. As regards statues in a garden, we may learn from the experiments at South Kensington that bright gilding and dark bronze are equally unsuitable to our atmosphere—the first looks staring, the last looks dull. Marble, stone, and terra-cotta, are still the best; whilst rustic figures and groups may well be cast in lead or common metal, as seen in the gardens of the Pitti Palace at Florence, where they have always appeared to us to harmonize admirably with the foliage which ought to serve as a background or setting to them. Then, it is a great mistake to isolate large statues, as is commonly the practice of our modern garden-planners. If they are poor in point of art—and we do not expect the best in a garden—they are exposed over-much to notice, and if good, they seem to deserve some covering or protection from our rough climate. Statues in groups are preferable also to single figures, and the best background they can have is a well-clipped evergreen hedge, or palisade as it is technically called. As regards colossal statues, we do not care to see them: they may serve in a city, but in a garden they are out of place. The most extraordinary example of this kind is the "Genius of the Apennines," built up of brick and mortar, and cemented over,—with a staircase up his inside and a room in his head; this figure, about 60 ft. high, is monstrous strange, and should be a "caution" as Americans say. No garden, we hold, is complete without a sun-dial, which may form quite a picturesque feature on the terrace, with steps, seats, and appropriate statuettes. Modern landscape gardeners approve of what they call "prospect towers"—such as are the Chinese pagodas at Kew and Alton Towers ; but we do not hold with them—they look too isolated and unmeaning. A prospect tower, or *belvedere*, is better planned in combination with the main building, to which it forms an additional feature capable of very effective treatment.

Out of vogue as it now is, we venture to say a few words in favour of the topiary art. We do not wish to see the evergreen pipes and punch-bowls already spoken of, nor those figures which worthy Gervase Markham describes in his "Way to get Wealth" as "being in the shape of men armed in the field and ready to give battle, and swift-running hounds to chase the deer or hunt the hare ;" though it be true, as he observes, "that this kind of hunting shall not waste your corn, nor much your coyn." Nor "Adam and Eve in yew—Adam a little shattered by the fall of the tree of knowledge in the great storm ; but Eve and the Serpent very flourishing," as described in No. 173 of the *Guardian*, to which the reader is referred for a very humorous satire on the *ars topiaria*. But, as Bacon says, we "do not like images cut out in juniper or other garden stuff; they be for children. Little low hedges, round like welts, with some pretty pyramids, we like well." Neatly-trimmed thickset hedges, the monotonous lines of which are, happily, relieved by a few such conventional figures in yew, cypress, &c., we look on with much pleasure ; there is an air also of orderliness and care about them which is not displeasing : they should be sparingly used, we think, yet not altogether condemned. As regards flower-beds, it is still too much the custom to form them into patterns, and, although we have given up the "embroidery parterres" of our forefathers, we still err in making intricate designs with our flower-beds which are only ornamental on plan, and keep the flowers, in which we delight, away from sight and scent. Serpentine walks are also bad : far preferable, to our mind, are even the straightest of our old *allées*. Common sense should be studied in these matters ; and, where the nature of the ground requires or permits it, these winding paths are admirable ; but on a flat surface they seem made merely to make your way, from one point to another, as long and devious as possible. Moreover, in a small plot of ground, such meandering curves are positively painful to the eye, which finds no repose and is distracted by pathways which seem to lead one nowhere—in search of nothing.

As to seats, which should be placed in all points where a good view is to be obtained, or restful retreat,—they should always be provided with backs. The seat itself may be of a hard, close wood, or of metal laths, but the ornamental portions are best in stone. Around them may be vases tastefully disposed; and thus with flowers sweet of scent and bright of hue, and the rippling sound of a stream hard by, each sense be gratified and the spirits soothed into blissful peace.

Andrew Nicholl, Pinxt

We love to see flowers around us: they lend a charm even to the gloom of the cemetery, and redeem it from its sombre character; for are not we, too, flowers of mortal growth, who wither and die here, indeed, but bloom perennial in a happier clime? How greatly, too, are the houses of the living improved by a few flowers, not only pictorially, but architecturally. We remember Paris when the Louvre and other public buildings were unadorned even with grass-plots in the courts, &c.; but now how charming they look, with their little borders of box, and grass, and sweet-smelling, sweet-looking flowers! Never have we seen architecture better set off than in those churches which are now at times planted round with flower-beds. We have no need, however, to dilate upon this theme: who does not love flowers—those "stars which in earth's firmament do shine?" Our gossip now is over about architecture and gardening, and if we have succeeded in making out a case in favour of the principles of gardening in connection with architecture as practised during the sixteenth and seventeenth centuries, showing that they ought not to be so utterly condemned as they have been, and that, with all their faults, they present many points worthy of retention, imitation, and development, our paper on this subject will not have been written in vain.

THE FLYING FISH.

(*Exocilus volitans.**)

By W. B. Lord, Royal Artillery.

THE monotony of a long sea-voyage is most agreeably broken by observing the habits and watching the movements of the endless variety of curious and beautiful objects hourly presented to view, cleaving the air on restless pinion as the good ship speeds on her way; skimming the crest of some rolling billow; or soaring away aloft on outstretched wing; yet ever following and keeping her company. There are sea treasures too, wave borne, which well repay investigation. In southern climes the types of animal and vegetable life brought to the notice of the observant voyager, are more varied and attractive than in the colder seas of our own latitude. The exquisite colouring and beautiful form of the *Portuguese man-of-war* as it floats gracefully by; the huge turtle sluggishly drifting with the current; the passing tufts of *gulf weed*, with the curious crustacea and infusoria often found amongst them; the pigmy sail of the graceful nautilus; and the horn-like fin of the dreaded shark, are each in turn objects of interest. The stormy petrels, too, hover swallow-like in the wake, and appear almost disposed to peep in at the cabin windows to inquire after the health of "Mother Carey," whose own chickens they are, by the sailors, declared to be; and who strongly object to their being shot at or molested in any way, for fear of rousing the ire of that respected old lady, and so bringing on a gale of wind as a manifestation of her displeasure. There is no sight more charming or pleasing to remember than the flight of a shoal of Flying Fish as they shoot forth from the dark green wave in a glittering throng, like silver birds in some gay fairy tale, —gleaming brightly in the sunshine, and then, with a mere touch on the crest of the heaving billow, again flit onward reinvigorated and refreshed.

The extreme distance to which each of these flights extends is rarely beyond two hundred yards, and usually even much less space is traversed. The sustaining power possessed by the wings, or fins, appears mainly to depend on the presence of moisture; but whether the act of tipping the waves from time to time is sufficient to communicate it, or whether the peculiar form of the tail enables them rapidly to cast water over themselves, is a question which has yet to be solved. Captain Tobin, in speaking of the Flying Fish, says,—

"The lower half of the tail is fully twice the length of the upper. The use of it has always appeared evident to me. I have by the hour, watched the dolphins and bonitas in pursuit of them, when, without wholly immersing themselves, which would have proved fatal to them, they have disposed in their progressive motion the lower part of the tail in such a manner as to supply their wings with moisture, so as to support them above the surface. I never saw one exceed the distance of one hundred yards in its flight without being obliged to dip for a fresh supply."

We, too, have had numerous opportunities of observing the movements of these interesting creatures, and incline to the belief that a moist fin is essential to their aërial progress; and that both the stiff, outstretched form of wing made use of in skimming or hovering, and the rapid winnowing of the fins seen at particular periods of the flight, are each produced at the will of the fish, just as a hawk either soars aloft, flutters in mid-air, or swoops down on its prey. Mr. Swainson thus gives the result of his experiences in the matter:—

"It is said, also, that the fins are merely used as parachutes, and do not, as in birds, propel the fish forward by repeated movements. This again admits of doubt. The flight of these fish, though short, is very rapid, almost as much so as that of a swallow—and every one knows that these birds will advance far with little or no beating motion of the wings. In crossing the Line in 1816, we were very anxious to ascertain this point in the economy of the

* The species of Flying Fish which most frequently comes under the notice of the voyager is that now under consideration, which is known as the "oceanic," and *E. Exiliens*, or the Mediterranean Flying Fish. Although alike in general appearance, they are distinguished by well-marked anatomical peculiarities.

Flying Fish; but, although we had them before our eyes almost every quarter of an hour for a week, their flight was so rapid that, at the nearest distance they ever were to the ship, we found it utterly impossible for the eye to determine this question, as it is to see the vibrations of the wings of a fly. Our impression is that this act of flying is effected in two ways: first, there is a spring, or leap, by which the fish is raised out of the water; and then the pectoral fins are spread and employed to propel the fish in a forward direction either by a few flappings, or by the motion that is analogous to the skimming of swallows. It is quite true that they have not the power of elevating themselves in the air in an undulating direction, as we see in swallows. The course of their flights being always that of a very slight arch, the height of which, we believe, varies with the species; those near the Equinoxial Line, towards America, have a low flight, so that though innumerable flocks rose round the vessel in all directions, not one ascended sufficiently high to fall into it; whilst in other instances they have fallen into ships from fourteen to twenty feet above the water. Sometimes they fly off in an oblique, angular direction from that which they first took,—an important fact, because it proves that this flying is effected not merely by the leap, but by the action of the fins and tail just as these members are used to influence the course of birds, although the mode in which the pectorals are used for this purpose we do not pretend to understand."

That they have the most perfect control over their own movements and direction of flight there can be no doubt, but the fact of their so frequently falling on board ship and into boats, leads us to imagine that their powers of vision must be defective when in the air, or that the certain and well-understood danger below distracts their attention from the unknown risks above. The powers of flight possessed by Flying Fish, and the life of danger and persecution led by them, are thus described by Captain Basil Hall:—

"A notion prevails afloat, but I know not how just it may be, that they can fly no longer than whilst their wings, or fins, remain wet. That they rise as high as twenty feet above the water is certain, from their being found in parts of a ship which are full as much as that out of the sea. I remember seeing one about nine inches in length, and weighing not less than half a pound, skim into the *Volage's* main deck port, just abreast the gangway: one of the seamen was coming up the quarter-deck ladder at the moment when the fish, entering the port, struck the astonished mariner on the temple, knocked him off the step, and very nearly threw him down at full length.

"The amiable Humboldt good-naturedly suggests that the flight of these fish may be mere gambols, and not proofs of their being pursued by their enemy, the dolphin. I wish I could believe so, for it were much more agreeable to suppose that at the end of a fine sweep which they take, they fall safely on the bosom of the sea. I do not recollect whether that eminent traveller, who not only observes many more things than most men, but describes them much better, has anywhere mentioned his having witnessed one of these chases. The best I remember was during the first voyage I ever made through those regions of the sun, the Tropical seas, and I will describe it:—

"We were stealing along pleasantly enough under the influence of a newly-formed breeze which, as yet, was confined to the upper sails, and every one was looking, open-mouthed to the eastward, to catch a little cool air, or was congratulating his neighbour on getting rid of the calm, in which we had been so long half-roasted, half-suffocated, when about a dozen Flying Fish rose out of the water and skimmed away to windward, at the height of ten or twelve feet above the surface; shortly after, we discovered two or three dolphins ranging past the ship in all their beauty. Presently the ship in her course put up another shoal of these little creatures, which flew in the same direction which the others had taken. A large dolphin, which had been keeping company with us at the depth of two or three fathoms, and, as usual, glistening most beautifully in the sun, no sooner detected our poor, dear, little friends taking wing, than he turned his head towards them, and darting to the surface, leaped from the water with a swiftness little short, as it seemed, of a cannon-ball. But although the force with which he shot himself into the air made him gain upon the Flying Fish at first, yet the start which they had got enabled them to keep a-head of him for a considerable time. The length of the dolphin's first spring could not be less than ten yards, and after he fell we could see him gliding like lightning through the water, for a moment, when he again rose and shot forward with a speed considerably greater than at first, and of course, to a still greater distance. In this manner the merciless pursuer seemed to stride along the sea with fearful rapidity, whilst his brilliant coat sparkled and flashed in the sun quite splendidly. As he fell headlong on the water, at the end of each huge leap, a series of circles were sent far over the still surface which lay as smooth as a mirror.

"The group of Flying Fish, thus hotly pursued, at length dropped into the sea, but we were rejoiced to observe *that they merely touched the top of the swell, and scarcely sank into it*—at least, they instantly set off again in a *fresh and even more vigorous flight*. It was particularly interesting to observe that the direction they now took was quite different from the one in which they had set out; thus implying that they had detected the fierce enemy who was following them with giant steps along the waves, and was now rapidly gaining upon them—his terrific pace, indeed, was two or three times as swift as theirs—poor, little things. The dolphin was fully as quick-sighted as the Flying Fish, for whenever they changed their flight in the smallest degree, he lost not the tenth part of a second in shaping a new course in pursuit; whilst they, in a manner really not unlike that of the hare, doubled more than once upon their pursuer. But it was soon too plainly to be seen that the strength and confidence of the Flying Fish was fast ebbing. Their flights became shorter and shorter, and their course more fluttering and uncertain, whilst the enormous leaps of the dolphin appeared only more vigorous at each bound. At last, indeed, we could see, or fancied we could see, that this skilful sea-sportsman so arranged all his springs that he contrived to fall at the end of each, just under the very spot at which the exhausted Flying Fish were about to drop. Sometimes this took place at too great a distance for us to see from the deck exactly what had happened; but on our mounting into the rigging, we could discover that many of the unfortunate little creatures, one after another, either fell into the dolphin's jaws as they lighted on the water, or were snapped up instantly afterwards."

We have enjoyed several opportunities of watching the progress and results of these sea-hunts. It frequently happens, too, that as the ship lays over, and the passing wave leaps joyously up, several members of a shoal will pay an unceremonious visit to the deck or quarter-boats, when some active Jack Tar soon pounces on and secures them.

Mr. D'Ewes relates the following anecdote, showing the unexpected manner in which Flying Fish sometimes intrude where their presence is undesirable, and the alarming consequences occasionally caused by the intrusion:—

"We were," he says, "seated at the cuddy table at breakfast, on a broiling morning in the Tropics, when suddenly a loud cry of terror issued from one of the side cabins occupied by Captain R——s and his newly-married wife, who were *en route* to Madras. A sudden rush was made to the door of the cabin in question, and the cause was soon explained. Madame, who was leaving her 'Highland home' for the first time in her life, and whose rather robust figure, golden hair, and freckled complexion, were all decidedly anti-tropical, had been reclining in her cot in a state of light dishabille, the upper part of her person close

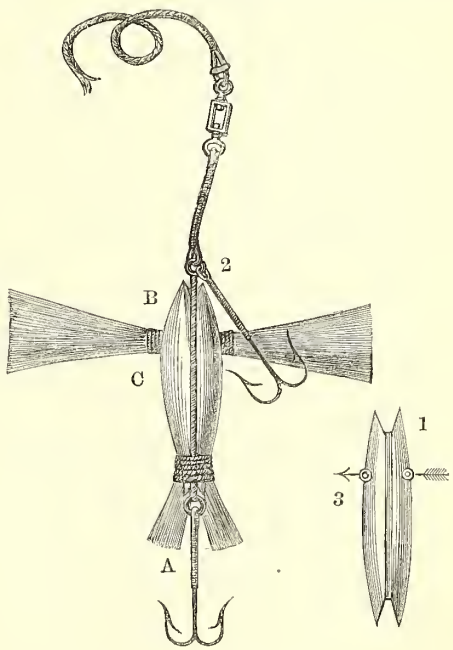
to the open port-hole, in order to catch any breath of air that might arise, when an adventurous Flying Fish alighted upon her bosom. This piscatory intrusion was the cause of the screams we heard. The lady's knowledge of natural history, or perhaps her belief in its laws not having extended to this very remarkable marine phenomenon, all the answer she could be induced to give to her husband's explanations and endearments, was the repeated assertion, 'Aueh, mon, it's the deil.'"

Although the life of our fluttering, silvery little friend looks, at the first glance, so much like a "merry-go-round" of joy, it is, in fact, very far from being so. Nemesis, in the form of the bonita, the dolphin, or some other scaly enemy, is rarely far behind, dividing the spray like arrows. Now in sight, with striped back and upraised fins, darting eagerly onward in the chase; now lost to view beneath the waves, and anon, with sheen of gold, crossing and re-crossing like hounds on the track of game; whilst greedy sea-fowl wheel on swift pinions, ready for a swoop at the silvery victims below. Mr. Forbes, that close observer of nature, and faithful recorder of things Oriental, makes the following remark in his memoirs:—

"In the Hindoo metempsyehosis, where the bodies of the dove, the bee, the ant, and other favourite animals, are assigned as the temporary abode of tender, affectionate, and tranquil spirits, and lions, tigers, and hyenas for those of a ferocious disposition, the body of the Flying Fish would be a fit receptaele for the malicious, envious souls, who, like the arch fiend they imitate, aro continually going about seeking whom they may devour."

It is strange that, with so many enemies always on the alert, Flying Fish should be so numerous; and it is a question well worthy of the trouble of solution, whether the spawn bears with it the natural protection which has been attributed to it. Plumier in his MSS. says that the ova of the Flying Fish is so intensely acrid that not the smallest quantity of them can be swallowed, for they immediately burn off the skin from the tongue and palate. It would be well worth while to examine on the spot at the Antilles (for Plumier does not distinguish the species producing this ova), whether the flesh be not equally caustic; and whether this quality arises from the peculiar character of food made use of, or is bestowed by nature for the preservation of the spawn, in order to secure their propagation. When the bonitas and albacores are in hot pursuit of their prey, man, in his turn, often makes prey of them. These beautiful fish are at times taken of considerable size; they somewhat resemble gigantic mackerel, and belong to the same family (*Scomberidæ*). Instances are recorded of their being captured on our own coasts. Some season or two since, when scrambling about, specimen hunting, on the coast of Cornwall, we discovered a remarkably fine specimen of the bonita, lying dead amongst the tangled weed in one of those sandy, pebbly pools in which cunning old crabs, limpets of adhesive habits, and anthozoa of rainbow hue, delight to dwell. Few well-authenticated instances, however, are recorded of their taking a bait. In the warm seas of the south, and under a tropical sky, they are not only abundant, but take a bait such as we have figured at fig. 1 voraciously, following, like the dolphins, the shoals of Flying Fish, which are also immensely numerous within and on the borders of the Tropics, with unceasing pertinacity. For the table, neither the bonita nor albacore is particularly good, being to our taste rather dry. The bones, too, however necessary in an anatomical point of view, are inconvenient, to say the least of them, when their number, sharpness, and length have to be studied at the breakfast or dinner table. Still, either the one or the other forms an agreeable change in the ordinary *rôle* of cabin fare. The Flying Fish, on the other hand, are as good as they are beautiful; and the great ground for complaint regarding them is, that their visits are not more general and frequent. Nicely fried, after the manner of smelts, they form a feast an alderman might envy.

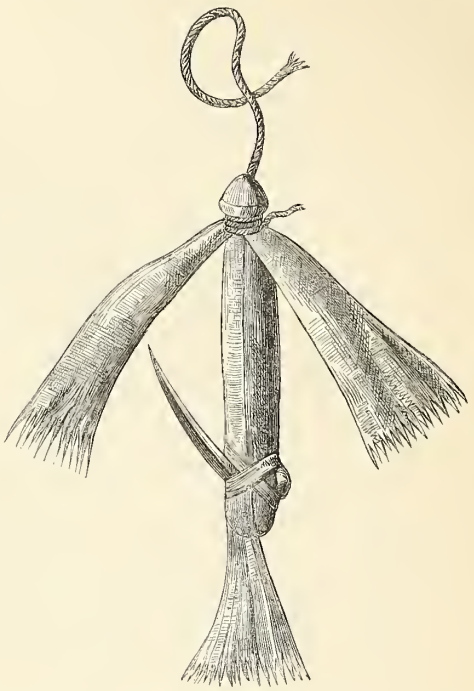
When the bonitas and albacores are darting hither and thither in pursuit of their flying prey, the best opportunity will be afforded for capturing some of these hunters of the sea; and thus do we proceed.



A bait, as drawn in the accompanying woodcut, first described by us in our work "Sea Fish and how to Catch them," should be prepared. Its mode of construction is simple in the extreme, and many of the materials are easy of obtainment even on board ship. Still, a few hooks of different sizes, large swivels, and strong fishing-lines, should form a portion of every traveller's sea-kit, as they at all times minister to amusement, and are occasionally of the greatest value.

First, then, procure a piece of oak or other strong grained wood, of about from five to six inches long; taper it from head to tail like a small fish, cut a deep longitudinal groove both above and below, from end to end, leaving a notch at each extremity (*vide* fig. 1). Then twist a

piece of stout copper wire into the groove, leaving a ring at each end, to lay across the notches, as in fig. 2. Bore a hole through the body with a gimblet or red-hot wire, as shown by the arrow at fig. 3, and at each side secure in the holes so made a tuft of bristles from a sweeping-brush, which is best done with a little hot pitch, as *vide* fig. C. These serve to represent the fins or wings. Another and shorter tuft opened to receive the tapered end of the body, and secured in its place with waxed silk or thread, serves for a tail. Prepare a long, narrow strip of sheet lead, wind it firmly and evenly in a spiral coil, from end to end; scrape the lead bright and smooth with a pocket-knife, secure the two ends with tacks, and the body is complete. Mount it as follows: fasten two No. 4 *sea-hooks* back to back on a piece of strong line about five inches long, which must be *served* with fine copper wire; form a loop in the end, and attach it to the tail ring A. The same arrangement of hooks on a three-inch piece of line *served* like the other, must be looped to the head ring, B. Attach your main line, which must be a strong one, to the bait, with a loop at B. Place a couple of large-sized brass swivels at two feet apart, the first being fitted as shown in the woodcut, and *serve* the line from about a foot from the bait with the wire, as in the hook lengths. An omission of this precaution would in all probability, lead to the loss of both fish and bait, as both the bonita and albacore have sets of remarkably sharp teeth, and know well how to use them. The arrangements being now completed, the lure may be cast into the sea, and the line *veered* away until a sufficient distance from the ship has been reached, when the bait should be kept leaping from wave to wave by hauling in and giving out line: thus roughly imitating the motions of the Flying Fish. Few bonitas or albacores will be found self-denying enough to resist this attraction. The glittering, springing bait once seen by the pursuing fish, a general rush is made; a gleam of blue and silver is seen for an instant, and the line becomes tense as a bell-wire, as the painted captive sheers off below, or darts in a race for life far off from the ship's side. Coolness, readiness, and strong tackle are the great aids now required, and with them, backed up with a moderate share of luck, the prisoner may be brought on board, where with stark, stiff fins, quick shuddering flutter, and changing ultra-marine hues, his life rapidly ebbs away, and the remorseless cook claims him as a sort of windfall to swell the *carte* of the next coming meal. Honest *forecastle Jack* either strikes the bonita and albacore with the *grains*—a trident-shaped instrument, in the management of which he is usually an adept,—or makes use of a primitive contrivance, with which to inveigle them, and thus he prepares it: a stout piece of hard, strong wood, about six or seven inches long, is obtained, notched at the neck, to receive a couple or three half-hitches of strong line, under which is firmly secured a strip of white rag to serve as wings. At the lower or tail end of the stick a hole is obliquely bored, and a stout sharp nail, such as carpenters use, driven through it (*vide* fig.) A cross lashing of fine twine is then put on, in order to keep the nail in its place,



prevent the wood from splitting, and to secure a short piece of rag, which represents the tail in its proper position. The bait is now ready for use, and is by no means a bad make-shift when hooks are difficult to obtain. The Esquimaux use contrivances of various sizes, very much in principle like this, for the capture of both large and small fish, only omitting the rag, baiting them much as we bait an ordinary fish-hook.

The *trace*, or connecting piece between the hook and the line, is composed of a strip of sinew or whale-bone; the body or shaft, of a bit of driftwood gathered from the beach; the point, of a sharp, finely-scraped bone; and the arming or lashing, of a thread of tendon or split ground willow. The neatness and ingenuity

displayed by them in the manufacture of these simple but effective fishing contrivances, serve to show how much may be effected by small means well applied. The woodcut will give a better idea of their mode of construction than would any written description. From the hollow pearl-shell bait of the Polynesian Islanders, to the glittering spoon-bowl of the finished English fisherman, the same principle of construction is taken advantage of, and almost the same movement through the water secured; and whether the highly finished Limerick hook of *O'Shaughnessy's own make*, or the fragment of fire-hardened root of the forest tree, carved by Indian ingenuity, is used, the pleasure to the captor of the sealy prize is much the same. Man is by nature a hunting animal, and his instinct, whether savage or civilized, is to catch something.

NOTES ON THE RED DEER.

THE Red Deer, the *Cervus Elephas* of Linnæus, appears to exist almost universally in Northern Europe, and in a considerable portion of Northern Asia. It is not found in America, although the name is given to the American Deer (*Cervus Virginianus* of Baird), a species which closely resembles our Fallow Deer. In the Hudson's Bay Territory it is also applied to the Wapiti (*Cervus Canadiensis*), which in Canada is termed the Elk, the true Elk being there known as the "Moose," a confusion of names which has led to endless mistakes in narratives of sport and travel. The height of the British Red Deer may be averaged at three and a half feet. The average weight of a full-grown male is, according to Mr. Scrope,* about 25 stone, imperial. The males are called stags or harts, the females hinds. The female consorts with the male in her second year, carries her young eight months, and the young follow the mother about ten months. The young of both sexes is called a calf until six months old, when the horns of the males begin to appear, and they become brockets, staggards, and lastly, stags or harts. The males carry their horns ten months.

Blumenbach, in his "Comparative Anatomy," asserts this annual reproduction of the horns in the deer species, to be "one of the most remarkable phenomena of animal physiology." His English translators, Lawrence and Coulson, have added a note on the subject, which we will here transcribe:

"The word horn, which is frequently applied in English to the *antlers* of the deer kind, as well as to the *horns* of other genera, would lead to erroneous notions on this subject. The antler is a *real bone*, it is formed in the same manner and consists of the same elements as other bones; its structure is also the same. It adheres to the frontal bone by its basis, and the substance of the two parts being consolidated together, no distinction can be traced when the antler is perfectly organized. But the skin of the forehead terminates at its basis, which is marked by an irregular projecting bony circle, and there is neither skin nor periosteum on the rest of it. The time of its remaining on the head is about a year. As the period of its fall approaches, a reddish mark of separation is observed between the process of the frontal bone and the antler. This becomes more and more distinctly marked, until the connection is entirely destroyed.

"The skin of the forehead extends over the frontal bone when the antler has fallen. At the period of its regeneration, a tubercle arises and takes the form of the future antler, being still covered by a prolongation of the skin. The structure of the part at this time is soft and cartilaginous; it is immediately invested by a true periosteum, containing large and numerous vessels, which by the gradual deposition of ossific matter convert the young antler into a perfect bone. The vessels pass through openings in the bony circle at the foot of the antler, the formation of this part proceeding in the same ratio with that of the rest; the openings are contracted and the vessels thereby pressed, until a complete obstruction ensues. The skin and periosteum then dry and perish, and fall off, the surface of the antler remaining uncovered. At the stated period it falls off, to be renewed again, always increasing in size. The antler is shed in the spring, and renewed in the summer."

We may add, that while the horns are still tender, the animals are more than usually shy, and in the combats which often take place between the males, they appear carefully to avoid approaching their heads together, but, rearing themselves on their hind legs, fight desperately with their fore feet.

There is another remarkable provision of Nature which we may here notice,—the spiracula, or additional holes for respiration, which are found in *all* the varieties of both the deer and antelope tribes. White of Selborne appears to have been the first among modern naturalists to notice this fact, which has since become generally recognized, although he quotes a line from the Greek poet Oppian, showing that the ancients were aware of the peculiarity.*

"If some curious gentleman," he writes, "would procure the head of a deer, and have it dissected, he would find it furnished with two spiracula or breathing-places, besides the nostrils, probably answering to the *puncta lacrymalia* in the human head. When deer are thirsty, they plunge their noses, like some horses, very deep under water, while in the act of drinking, and continue them in that situation for a considerable time; but to obviate any inconveniency, they can open two vents, one at the inner corner of each eye, having a communication with the nose. Here seems to be an extraordinary provision of Nature, worthy our attention, and which has not, that I know of, been noticed by any naturalist, for it looks as if these creatures could not be suffocated, though both their mouths and nostrils were stopped. This curious formation of the head may be of singular service to beasts of chase by affording them free respiration, and no doubt these additional nostrils are thrown open when they are hard run. Mr. Ray observed, that at Malta, the owners slit up the nostrils of such asses as were hard worked, for they being naturally straight or small, did not admit air sufficient to serve them, when they travelled or laboured in that hot climate. And we know

* Scrope's "Deer Stalking in the Highlands."

* "Τετράδυμοι ῥῖνες, πίσυρες πνοιῇσι διαυλοί."

that grooms and gentlemen of the turf think large nostrils necessary, and a perfection in race-horses."

A little further on, Mr. White adds :—

"Mr. Pennant has sent me the following curious and pertinent reply:—'I was much surprised to find in the antelope something analogous to what you mention as remarkable in deer. This animal has also a long slit beneath each eye, which can be opened and shut at pleasure. On holding an orange to one, the creature made as much use of these orifices as of his nostrils, applying them to the fruit, and seeming to smell it through them.'"

The writer of the present article can bear witness to the truth of this assertion, having repeatedly noticed it in two domesticated antelopes which he had in his possession in South Africa. Not only do these spiracula perform the functions above described, but by opening an additional communication with the olfactory nerve, they contribute to that exquisite keenness of scent upon which these animals appear so greatly to rely for safety.

Again, when hard pressed, the Deer frequently takes to the water, or "soils," as it is termed in "Venerie." In these cases a stag will lie down in the water, his horns laid flat on his back, and but a small portion of the head above water, a position in which additional means of respiration are doubtless most necessary. On these occasions (we may observe), not only is the animal hidden by the water, but, in a running stream, the scent will be carried *down* stream, with a rapidity dependent on the velocity of the current, and thus almost to a certainty mislead his pursuers.

Red Deer are now nearly extinct in the British Islands, save in the Highland deer forests, where their preservation has been an undertaking of expense and labour. During a severe winter, a few seasons back, a Red Deer was found in the north of Yorkshire; but he, it was supposed, was a straggler from one of the deer preserves further north; and we believe we are correct in saying that the only spot on this side of the Tweed where these animals can now be found, is a small tract of limestone country, about forty miles long and fifty broad, running along the shores of the Bristol Channel, towards the Somersetshire range, known as the Quantock Hills, and forming a part of Exmoor Forest.

Some few years since a small remnant of the breed also existed on the least-frequented parts of the Cumberland Fells; but a gentleman well acquainted with the natural history of the northern counties informs the writer that these animals, *he believes*, have now disappeared altogether. Perhaps some of our readers may be able to throw additional light on this point.

Many writers assert that Red Deer were introduced into England from France. They were at any rate very abundant as early as the days of the Saxons in every part of England. The history of the chase at that period is somewhat obscure. The Saxons—with whom it was a serious occupation, carried on as much to supply the necessaries of life as for amusement—appear to have been content with driving and trapping the deer. The more improved style of "Venerie," when the quarry was run down with the aid of "hound and horn," dates from the Norman period, when those large portions of country, like the New Forest, were laid waste to form royal hunting-grounds.

A few centuries ago the chase of the deer would seem to have possessed more of the danger and excitement of actual warfare than we are now accustomed to associate with the pursuit of any English game. Sir Walter Scott has thus described some of the incidents of the chase in a note to his poem of the "Lady of the Lake":—

"When the stag turned to bay, the hunter had the perilous task of going in upon, and killing or disabling the desperate animal. At certain times of the year this was held particularly dangerous. It was at all times a task to be adventured on wisely and warily, either by getting behind the stag when he was gazing at the hounds, or by watching an opportunity to gallop in roundly upon him and killing with the sword. (See many directions to this purpose in 'The Booke of Hunting.') Wilson, the historian, has recorded a providential escape which befell him, when a young man, and a follower of the Earl of Essex:—'Sir P. Lee, of Lime, in Cheshire, invited my lord one summer to hunt the stagg; and having a great stagg in chase, and many gentlemen in pursuit, the stagg took *soyle*, and divers, among whom I was one, alighted, and stood ready with drawne swordes, to have a cut at him on his coming out of the water. The stagg then being wonderfully fierce and dangerous, made us youthes more cager to be at him. But he escaped us all, and it was my misfortune to be hindered of my coming nere him—the way being slipirie—by a fall, which gave occasion to some who did not know me, to speak as if I had fallen thro' feare—which being told mee, I left the stagg, and followed the gentleman who (firste) spake it, but I found him of that cold temper that it seems his words made an escape from him, as by his denial and repentance it appeared.

"'But this made mee much more violente in pursuite of the stagg, to recover my reputation, and I happened to be the only horseman in when the dogs sett him up at bay, and approaching nere him on horseback he broke thro' the dogs and ran at mee, and tore my horse's side with his hornes close by my thigh. Then I quitted my horse and grew more cunning (for the dogs had got him at bay again), stealing behind him, and with my sworde cutting his hamstrings, and then got upon his backe and cut his throat, which as I was doing, the companie came in and blamed my rashnesse for running such a hazard.'"

The reader will remember that a similar feat is said to have been performed in the presence of Queen Elizabeth.

The Scottish kings appear to have been sometimes content with a tamer kind of sport; shooting with the bow from an elevated spot, before which the deer were driven, as is now often practised on the Continent.

Pennant, in the second vol. of his "History of Scotland," when mentioning a walk that retained the name of "the King's Seat," having been the place where the Scottish monarchs placed themselves to direct their shafts at the flying deer driven that way, quotes the following English version of a story told by Barclay in an old treatise, *Contra Monarchomachos*, of Mary Queen of Scots, showing that even this style of sport had its danger.

"In the year 1563, the Earl of Atholl, a prince of the blood royal, had with much trouble and vast expense a hunting match for the entertainment of our most illustrious and most gracious Queen. Our people call this a royal

hunting. I was then a young man and was present on that occasion. *Two thousand* Highlanders, or wild Scots as you call them here, were employed to drive to the hunting ground all the deer from the woods and hills of Atholl, Banedoch, Marr, Murray, and other counties about. As these Highlanders use a very light dress, and are very swift of foot, they went up and down so nimbly, that in *two months* they brought together *two thousand* Red Deer, *besides Roes* and *Fallow Deer*. The Queen, the great men, and others were in a glen when all these deer were brought forward before them. Believe me, the whole body moved forward in something like battle order. The sight still strikes me, for they had a leader whom they followed close wherever he moved.

"This leader was a very fine stag, with a very high head. This sight highly delighted the Queen, but she soon had cause to fear upon the Earl addressing her thus: 'Do you observe that stag who is foremost in the herd? There is danger from that stag; for if either feare or rage should drive him from the ridge of that hill, let every one look for himself, for none of us will be out of the way of harm, for the rest will follow this one, and having thrown us under foot, they will open a passage to the hill behind us.' What happened a moment after confirmed this opinion, for the Queen ordered one of the dogs to be let loose on one of the deer; this the dog pursues, the leading deer was frightened, he flies by the way he had come there, the rest fly after him, and break out where the thickest body of the Highlanders was; they had nothing for it but to lay themselves flat on the ground, and allow the deer to pass over them. It was told the Queen that several of the Highlanders were wounded, and two or three of them killed outright. The whole body had got clean off, had not the Highlanders fallen on a stratagem to cut off the rear from the main body. It was of those that had been separated, that the Queen's dogs and those of the nobility made slaughter.

"There were killed that day *three hundred and sixty-five deer, five wolves*,* and *some roes*."

We have italicized some of the above remarks to show the scale on which these huntings were conducted in the olden time, and the time devoted to them.

The numbers of deer appear to have been frequently thinned by disease. It is now a well-known fact that animals in a state of Nature frequently suffer from epidemic diseases, as much as those in confinement, the effects being more noticeable in countries where, as in England even in the Norman days, the larger carnivora have been exterminated. In some of the old chartularies of the Royal Forests, we find the right of hunting granted to certain individuals on condition of their hanging on trees, out of reach of the hounds, all carcases of deer dead of the murrain.

White, of Selborne, writing eighty years ago, thus describes the Forest of Wolmer (near Aldershott), the deer in which, at the beginning of the seventeenth century, were, he says, over 500 head in number.

"There is an old gamekeeper now (1778) alive, whose great-grandfather's grandfather, father and self, have held the keepership for more than a century. This person assures me that his father has often told him that Queen Anne, as she was journeying along the Portsmouth road, did not think the Forest of Wolmer beneath her royal regard. For she came out of the great road at Lippoek, which is just by, and reposing herself on a bank smoothed for that purpose, about half a mile distant from Wolmer Pond, and still called the Queen's bank, saw with great complacency the whole herd of Red Deer brought by the keepers along the vale before her, consisting of about five hundred head. 'But,' he adds, 'by means of the Waltham blacks, as the deer poachers are termed,' or, to use his own expression, 'when they began blacking,' they were reduced to fifty head, and so continued decreasing until the time of the late Duke of Cumberland. It is now more than thirty years ago that his Highness sent down an huntsman and six yeomen prickers, in scarlet jackets, laced with gold, attended by the stag hounds, ordering them to take every deer in this forest alive, and convey them to Windsor. In the course of the summer they caught every stag, some of which showed extraordinary diversion; but in the following winter, when the hinds were also carried off, such fine chases were exhibited as served the country for matter of talk and wonder for years afterwards. I saw, myself, one of the yeomen prickers single out a stag from the herd, and must confess it was the most curious feat of activity I ever beheld out of Mr. Astley's riding-school. The exertions made by the horse and rider much exceeded all my expectations, though the former excelled the latter in speed."

The large herds of deer, he adds, if they did much harm to the neighbouring crops, did far more to the morals of the inhabitants of the district, by the temptations they presented to poaching. The excesses of these Waltham blacks, as the poachers were termed, led to the passing of the Black Act, by which deer, sheep, horse-stealing, and innumerable petty pilferings, were declared capital crimes.

Windsor Forest, which extended over seventeen parishes, was disafforested in 1814, and was the scene of a royal hunting on a large scale; a part of the Life Guards were turned out to assist in driving the deer, of which several hundreds were collected, and many more destroyed by the country people, who had conceived the idea that when the act received the royal assent, the deer became public property.

We have already referred to the small portion of Exmoor on which these animals still exist. What the state of the adjoining parishes may be now, we know not; but, twenty years ago, the sheep-stealing and poaching proclivities of the natives fully bore out Mr. White's strictures. Stag hunting appears to have been regularly practised *here*, with a few trifling interruptions, since the days of Elizabeth. Stag or hart hunting commences in early summer, and continues until October. Hind hunting then takes its place, continues until Christmas, recommences at Lady-day, and continues until 10th May; the cessation during winter being chiefly on account of the animal's habit of "soiling," entailing so much water work on the hounds, with its accompanying evil, severe attacks of canine rheumatism. These deer show the aversion to sheep which is peculiar to all the deer tribe. It is curious that there seems to be a strong resemblance between the scent of these animals and that of the small Exmoor sheep, probably arising from the similarity of their food. Worrying sheep has always been a vice, and, as is generally the case with dogs addicted to it, is a perfectly incurable one in the Devon staghounds. What the number of the deer may now be we cannot state. Mr. Collyns, of Dulverton, in his amusing work, "The Chase of the Red Deer in

* A few years after this we read of great ravages being committed by wolves in Scotland (1577). The last wolf was killed in England *temp.* Edward I., and in Scotland in 1685.

Devon," states that in the best days of the sport, about fifty years ago, eight stags and as many hinds was about the annual average of killed.

The care and outlay expended on the Highland Deer Forests, and the far larger extent of pasturage they offer, of course enable them to present far larger herds. The numbers killed during the season (for which see the Scotch provincial papers every year) certainly contrast strongly with the small bags with which deer-stalkers were wont to be content thirty years ago, when the picturesque pages of Mr. Scrope's "Deer Stalking in the Highlands" (1834) first made the sport familiar to the reading public, and when breech-loading rifles were not.

If, as we are informed on good authority, £60 be the *minimum* average value of *each* animal thus killed, the cost of a season's sport in a large forest will not form an unworthy comparison with the outlay on the "royal huntings" of days long gone by.

CENTURION.

THE PARIS EXHIBITION OF 1867.

By G. W. YAPP.

THE preparations for the Great Exhibition of next year are beginning to attract universal attention. The dread of war has passed away; people are just beginning to return from the country, and to ask what is to be *the* subject for the coming year; the doubts about the completion of the immense building are blown into air, and the novel features, which are at the same time the popular ones, are beginning to exhibit themselves. The shell of the building is finished as regards the principal parts, the last huge pillars of the outer court were raised some time since, and the roofing, glazing, painting, and flooring, are all proceeding with great rapidity. The masons have done their work, and are gone to fresh fields, if not to pastures new; and the stalwart engineers and hammer-men will soon follow their brethren of the plumb-line and trowel; the great iron verandahs or *marquises* which surround the inner garden and the outer wall of the building towards the *parc* are approaching completion, and begin to give the whole a finished look, trimming off the stone wall within and the great iron wall without, as the fringe of a lady's dress trims the corset and the skirt. Considering the materials employed, and the size of the pieces used, the elegant lightness of the great outer verandah is truly surprising. Placed against the immense iron wall of the great Machinery Court, with its hundred huge pillars, its hundred triple windows, and its hundred feet of altitude, this iron verandah looks at a short distance like light lace-work by comparison. The Fine Art and Retrospective galleries are nearly all covered in, and many of the divisions are glazed, and the walls prepared for painting or colouring; the intermediate zones, which are to contain all the manufactured articles (except machinery), as well as raw materials, are mostly glazed, and are being painted of a chocolate tint; and the minor works of the great outer zone, or Machinery and Processes Court, are proceeding admirably. It is in the *parc*, however, that the greatest changes have taken place during the last few weeks, and there the principal interest just now attaches. The main entrances to the *parc* and to the building face the river, and we will therefore take the Seine for the starting-point of our observations. The *parc* is only divided from the river by the quay, which, however, is very broad in this part. This has been cut through, and a light iron bridge spans the opening. This will, when finished, supply an entrance and exit to the public arriving or departing by water, and an outlet for the small ornamental canal which runs through the grounds. This canal, which will be supplied by a great water-tower, now in course of erection, starts from the further end of the park, takes a tortuous course through the grounds, disappearing under the footpaths and buildings, and being open amid the shrubberies and flower-beds, and terminates in a large lake near the bridge just referred to. At the head of this lake is a solid circular stone structure, upon which is to be exhibited the system of electric lighting now to be seen in operation at some points of the French coast; a light-house on the old system will furnish means of comparison between the new and the old lanterns. Around the base of the light-house in question, masses of rock-work are being formed, over which will fall a sheet of water.

Hard by, stands a small church, which at first puzzled the public sadly, and many a *flâneur* gave it as his opinion that a religious edifice was scarcely required in connection with the Exhibition. The building, which is Gothic, has a chancel with aisles divided off by two rows of pillars, a regular transept, apsis, and lateral chapels. Its walls are pierced with as many windows as place could possibly be found for, and the roof is of a high pitch, and presents a very large surface. The object of the building is an admirable one: it is to supply a suitable frame and foundation for the exhibition of every kind of ecclesiastical decoration, internal and external, as also of church furniture, fittings, utensils, and ornaments. On the walls and roof without will be shown ornamental work in stone, marble, cement, brick, tile, and metal. The windows will be filled with stained glass; the interior will be paved in various styles, and with various materials; the walls will be covered with mosaic work, fresco paintings and pictures; each chapel will have its own altar and decorations; lustres, candelabra, and sconces, will hang from the roof, shine on the altars, and decorate the columns;

while sculpture, carving, church plate, and other objects of art and decoration, will complete the exhibition. The idea of thus showing the works of the ecclesiastical architect, decorator, goldsmith, and artificer in a suitable shrine, is an admirable one, and there is no doubt that the collection will be one of the most beautiful and curious of the kind that was ever brought together. Our neighbours have stolen a march on their visitors and allies, for neither the Belgian nor any other nation will have such suitable means of showing its ecclesiastical productions.

Close to the main entrance, and between it and the railway station, just without the limits of the *parc*, a large building is growing up, which will supply another novelty: this is for the Exhibition Club, which will comprise a large hall or exchange, news-rooms, writing-rooms, billiard-rooms, dining-rooms, kitchens; in short, all the features of an ordinary club, and furnish its subscribers with all kinds of facilities for business—to say nothing of amusement. To the club will be attached a post-office and telegraph-office. The Emperor, the Sultan, and his powerful vassal the Viceroy, will have each his pavilion in the *parc*, and a very elegant structure, nearly finished as regards the framing, stands on one side of the avenue which leads to the chief entrance of the building. It is a kiosk, consisting of a central portion, over which is a dome, and of four wings of elegant leaf-like form. The style of the building caused it to be christened at once by the loungers beyond the park railings, "the Sultan's Pavilion;" but those who have the privilege of the *entrée* know that it is for the host himself, the Emperor of the French, and not for his distinguished guest, the lord of the crescent and star. The Sultan's pavilion is not yet visible; but the Viceroy of Egypt is erecting a temple which promises to be one of the glories of the Exhibition. It is a large rectangular building, surrounded by an open colonnade, and measuring outside the latter about 84 feet by 60 feet. It is to be a complete reproduction of the famous temple of the sacred cow, Hothor, in its minutest details, and its execution has been entrusted to Mariette Bey, whose name is intimately connected with Egyptian research and illustration. The colonnade will consist of twenty-two columns and four large *antæ* at the corners, and the various parts of these, as well as the architrave, frieze, and intercolumniations, will be from the Ptolemaic structures of Philæ, Esneh, and Denderah. The decorations of the colonnade will represent, with all the variety of which the subject is susceptible, one of the Ptolemies making offerings to the divinity of the temple. In the façade will be introduced a bas-relief discovered last winter in the caves of Denderah, which is confidently declared to be an authentic contemporary portrait of the famous Cleopatra. The ceiling of the colonnade is to be painted blue, with golden stars, and decorated with figures of the great vulture of Medinet-Abou, with white bodies and particoloured, red and black, wings. On the outside of the walls of the temple itself will be a series of bas-reliefs, illustrative of the various arts of Ancient Egypt in chronological order. Those representing the first epoch will be derived from the Pyramids, Saqquarah, Aboukyr, Zawyel-el-Maïtin, and other contemporary sources. In the curious bas-reliefs from the tomb of Phtah Hosép (Saqquarah), the deceased is shown surrounded by the members of his household. There are fishing and hunting scenes in the marshes; chasing the gazelle in the plains with greyhounds; hunting the lion; a combat between a lion and a buffalo; slaves carrying a cage containing two lions; fêtes and dances. The bas-reliefs from the tomb of Ti include agricultural scenes, cattle, troops defiling before the defunct, a farmyard, a hunchback leading a greyhound, swans, geese, ducks, all represented with an amount of art which Egypt no longer possesses. Another compartment represents the construction of boats, cabinet-making, tanning, sculptors producing a statue, jewellers and others at work. Next come scenes of the navigation of the Nile, with craft of all kinds; a fight in the water between a crocodile and a hippopotamus; and the embarkation and transport of sculpture. In another great panel will be seen a reproduction of the bas-reliefs of the twelfth dynasty, with the famous scene of a visit paid to a moudyr by a Semitic family asking permission to reside in his province; industrial scenes, dances, music, and curious gymnastic feats and exercises. The bas-reliefs of the eighteenth dynasty, from Thebes and Abydos, include historic episodes, campaigns in Arabia and India, soldiers marching to the sound of trumpet and drum, the navigation of the Red Sea, disembarkations, conquests, captives led in chains, return to Thebes and triumph of the King; the fanatic Amenophis the Fourth on his war chariot, followed by his seven daughters, also in chariots; domestic scenes, house-building, and manufactures. Those from the tombs of the twenty-sixth dynasty at Thebes will occupy the last division. The outer surface of the walls of this temple will thus exhibit an abridgment of the history of Egyptian art during the whole four thousand years of its existence.

Within the temple itself will be represented the famous bas-reliefs of the great temple of Abydos, and, on the walls, two ranges of pictures, principally of the epoch of Seti. Among other objects of interest will figure a remarkable collection of ancient jewellery and objects of ornament and luxury; the statue of Chephren, in diorite or greenstone, believed to be the oldest statue in the world; a statue of the priest Râ-nefer, and another, in wood, of the Sheikh el Belled, considered as the finest specimen extant of Egyptian art; and a statue of the great Hothor herself in basalt, recently discovered; and a selection of the sculpture, coffers, and other objects, the gems of the Viceroy's museum of Boulâq.

In addition to this magnificent temple of art, which is to be surrounded, as far as practicable, with the vegetable productions of the country, the Viceroy has ordered two other buildings to be constructed, one representing the habitation of a

Fellah family of Upper Egypt, with stables for war dromedaries and domestic cattle, and a kiosk, one portion of which will contain a divan for the use of the Viceroy, who is expected to visit the Exhibition, while the other will represent an Egyptian *café*, with all its fittings and accessories; in addition to this, it is said that groups of native workmen will be seen pursuing their ordinary trades. It is quite evident that rich, thriving, though nominally dependent Egypt, will make a grand figure amongst the nations next year in the *Champ de Mars*.

The only European nation that yet makes any show is Belgium, who certainly will not be behindhand unless she follows the unfortunate example of the hare in the fable. Not satisfied with the amount or position of the space allotted to her, she has erected in the park two separate structures, a large rotunda for locomotives, the wooden framing of which was nearly completed a fortnight ago, and a rectangular building for her pictures, which promise to be very numerous. The latter structure is about a hundred feet in length, and being divided by a central wall, forms two galleries, which are to be lighted by sloping skylights with a transparent horizontal ceiling beneath them, the whole furnishing, of course, about four hundred feet stretch of wall. It is to be feared that the width of the galleries will not prove sufficient on crowded days: in other respects the building is well adapted for the intended purpose.

When we consider that the English division is in one of the circular ends of the building, and that consequently her picture galleries will not have one inch of flat wall, with the exception of the ends, which are all pierced with doorways, we feel bound to call the attention of the British commission, and especially to such portion of it as takes special interest in the efficient display of our art productions, to the unfortunate form of these curved galleries for picture-hanging, and to urge the inspection of the Belgium building, and the erection of something of the same kind for the due exhibition of our Reynoldses, Gainsboroughs, Hogarths, Wilsons, Constables, Lawrences, Wilkies, and Turners. The curved galleries would make excellent exhibition-rooms for other objects, but the cross lights, which nothing can remedy, must prove ruinous to paintings. A light iron building might be prepared and set up in a very short time, and would have the double advantage of security against both fire and damp, and of being ready for use the day it was erected. The question is already asked in Paris how is it that Great Britain is not yet appearing on the ground, seeing that so much is expected of her, especially in agricultural and other out-of-door Classes; and the formation of a suitable Art Gallery would be an admirable commencement.

Nearly one half of the further portion of the Park is to be devoted to the Horticultural Exhibition. This department will include, in addition to plantations, flower-beds, conservatories, and gigantic aquariums, in connection with a lake and cascades. One of the latter will be used for the purpose of aërating the salt water for the aquariums, and a large number of workmen are now employed on their foundations, and in the formation of the lake; but this quarter of the park is not in a condition to be spoken further about at present.

The plan of the horticultural portion of the Exhibition is bold and original, and we shall have to return to it shortly. The same remarks will apply to the Agricultural Department, which is expected to be unusually interesting; but the preparations for it are not commenced, or scarcely so. France, however, has a good deal of her material ready in the shape of the stalls, used upon several occasions in the *Palais de l'Industrie*, for the exhibitions of cattle and of horses. A very large tract of ground, somewhat lower down the river than the *Champ de Mars*, is also appropriated to agricultural purposes, and it is at this place that the competitive trials will take place.

There are to be seen in the Park several very ornamental buildings, in particoloured brick, with chimney-shafts. These are the houses for the motive power required to drive the "machinery in motion:" they are twelve in number, and are situated in a circle around the building, at a distance of about a hundred and fifty feet from its circumference. The driving machinery, with all its accessories, will be supplied by twelve large engineering firms; thus each of them will present a separate exhibit of steam-engines, boilers, and furnaces. Amongst the firms who have undertaken this service are two or more English ones established in France; but no firm in England appears in the list, a matter rather to be regretted.

On one side of the Park stands the Jury-house, an immense building of three stories, with access from the road outside, as well as from the grounds. This building has been completely finished, as regards the walls and roof, for some time, and will shortly be ready for occupation. Its isolation will make it most convenient for the important purpose to which it is to be applied. In another corner, that nearest the river and the city, stand models of stables and coach-houses, for the erection of which tenders have been issued by the Imperial Commission,—another novel and useful feature in the general arrangements.

The Commission has just made a very considerate change in the regulations respecting the Fine Arts Department; instead of sending in the works of art tendered for exhibition, as originally laid down in the rules, by the present month, which would have caused the owners to be deprived of their pictures and statues for more than twelve months in case of acceptance by the jury of admission, and for three or more in case of rejection, artists and others are now only required to hand in a list with dimensions of what they propose to send, and the jury will admit well-known works without examination, and will not require them to be delivered till the month of February; while those which they desire to examine need only be sent in January. This is a liberal and sensible regulation, which deserves notice and imitation.

The Commission intends to afford all possible encouragement for the exhibition of nautical matters, whether for commerce or amusement. A special landing-place, with a piece of ground in its rear, on which will be erected sheds and places of exhibition for models, plans, and accessory matters, will be set apart for the purpose, and a series of regattas and matches will be given on the Seine during the Exhibition. Our neighbours have progressed as rapidly in sculling and sailing during the last few years as they have in horse-racing, and it is to be hoped that some of our best crews will uphold the honour of old England, the Thames, the Cam, the Isis, and the Tyne, upon the Seine next summer. The Exhibition will not be complete unless an "University eight," a "Leander," and a "Watermen's" turn out; and nothing will give our friendly rivals a better notion of the power, pluck, and endurance of various classes of our countrymen. "A long pull, a strong pull, and a pull altogether," might serve as a motto for the English nautical department.

Of the amusements to be found on the grounds, it is too early to speak with precision. Everything is promised, and much may be confidently expected. Tenders have been accepted for the erection of a theatre, as well as of a *café chantant*, and we believe that preparations are on foot for the realization of these plans; but of this, anon. The illumination of the park at night has not only been decided on, but the gas-pipes are partly laid, and there is no doubt that the grounds, with places of amusement and of refreshment of all kinds, and the ample shelter in case of showers which will be afforded by the great outer verandah, will be a most attractive place of resort on sultry August nights. The whole of the grounds are not, however, to be lighted; they will be divided into two portions by a light fence, which will cut off the outer angles of the park, and enclose a large space of ground, with the Exhibition building in the centre, and in this central part of the park will be collected all the objects of interest, as well as amusement, which can be advantageously exhibited by artificial light.

To the present time, the programme of the Imperial Commission has been well kept, and there is no reason to anticipate that it will be departed from in a material degree, except for its improvement. The gathering of 1867 is expected to be magnificent, and we have no doubt that the good people of Paris will have reason to be satisfied.

ON SKETCHING FROM NATURE.

By Aaron Penley, Professor of Landscape Painting at the Royal Military Academy, Woolwich.

No. V. HUT AT GHORPHWYSFA, NORTH WALES.

THE road from Capel Curig to Snowdon passes by the hotel at Pen-y-Guryd, and thence taking a turn to the right (that to the left being to Beddgelert), ascends a hill of considerable length, the summit of which opens out to the tourist the wild and almost chaotic "pass of Llanberis." At this point there are a few poor huts or cottages with a comfortable little inn (a truly welcome one to travellers), taking the name of *Ghorphwysfa*, or a resting-place. To the left of this, there is a lone hut at the entrance of the rudely constructed road or mountain track, leading to the wondrous peak of Snowdon.

This hut forms the subject of our present illustration. Small and insignificant as it is, it has, from its desolate position, a character that impresses one with the idea of solemn dignity. It stands erect and solid in its stony construction; at the front of a vast arena of heights and depths, undulating and precipitous, full of the adjuncts of a mountain district, with huge masses of riven rocks occupying positions truly picturesque, and dispersed about—as well as disposed—in forms both grand and sublime. The lesser mountains (none can be called hills) are so distributed as to present so many prominent features in the scene, and from their barren and rocky heads, being somewhat rounded, probably by glacier action in times gone by, they serve to give table-lands from whence the sides undulate more or less suddenly, and continuing their descent deeper and deeper, they at length rest their base on the narrow and beautiful vale of Nant Gwynant. From the other side of this lovely spot—and it is a lovely one—the mountains, forming the group and extension of Moel Siabod take their rise, and a little way up can be seen the descending and winding road towards Beddgelert. These mountains are joined by other ranges, which assume every variety of direction and shape, rising one before another, and exhibiting rugged combinations of rock and herbage so diversified as to produce a constant change of colour. Thus they afford, as it were, fresh starting-points for more remote forms, until the eye rests upon outlines mingling with the clouds, connecting sky to earth, and producing an effect always grand, mysterious, and impressive. The lofty eminences to the right are the south-eastern buttresses or spurs of the Snowdon range. Nothing can be more picturesque than their sharp angular character, and either side being equally precipitous, the ridge is necessarily very narrow. The principal of these is named Lliwedd, a frowning steep, deeply furrowed and riven by blast and tempest, with a bleak and savage aspect, destitute of one redeeming point as to vegetation, save at the dipping of its base in the darkly-toned waters of Llyn Llydaw, a

wild and romantic lake about one and a half mile in length. The road or track to the right is exceedingly tortuous and hilly; and the large stones constantly rising in the centre make the drive anything but pleasant to those who are not in the habit of riding in cars almost without springs. I know no other locality where such exquisite combinations of foreground materials can be found. There is every characteristic that the sketcher can desire, and at times it is extremely difficult to settle which shall become the subject of the pencil. Patches of long and many-coloured grasses rise out of dark and purply blackened peat, contrasting with warm and grey stones, which, moss-grown and lichened, lie side by side in every possible way, and of every imaginable shape. It is truly surprising to witness the eccentricities of colour—for I must use the term—to be found upon the same species of stone. Some partake of the orange, others of browns, russets, purples, and greys, of every shade and hue; while not a few are almost colourless and white. It is this that enables the artist frequently to bring the whole force of the palette into his foreground without having recourse to drapery or cattle.

In giving the above description, it of course must not be supposed to have reference to the drawing of the stone-built hut with the surrounding country, because it were folly indeed to give, in a magazine like this, a subject for imitation so comprehensive and poetic in its character. But it has been introduced immediately on my return from a sketching tour in that locality (having made the solitary hotel at Pen-y-Guryd my head-quarters), that I might lay before many a lover of the grand in Nature the multiplicity of exquisite subjects with which the vicinity of Snowdon abounds. My stay there was sadly too short, not one day being without rain, and yet this did not prevent the endeavour to bring back some study fraught with instruction and profit. It is impossible to be seated before scenery of such sublime proportions, without reflecting upon the wonderful manner in which its stupendous forms are brought together. What perfect arrangement there is in every successive change, and with what exquisite felicity the whole are grouped so as to charm the eye by never-ending variety of outline and construction—these may be better imagined than told. Sometimes the effect is solemn and portentous, with passing clouds that, hurried on by the wind, assume all manner of shapes, sweep over the higher portions of the landscape, and envelop the mountain-tops in the most mysterious manner. At other times a parting cloud lets in a flood of light, exhibiting ramifications of rock and of inequalities that were little suspected to exist; or some projection is brought into prominence by silvery streaks of light, displaying a vividness almost startling. Indeed, the effects in a mountainous district are so ever fresh and fugitive, that a note-book should always be at hand, to write down the lessons Nature so abundantly teaches; and if in the progress of one sketch attention is given to passing changes, that one sketch may be productive of several pictures. Colour, again, is another feature for study and observation, subject to alteration of atmosphere and power of light. Space has to be rendered truthfully; distance must be portrayed as distance, and all the intermediate objects, as they advance to the foreground, must keep their place, localizing where they should localize, until colour is seen in all its unchanged character immediately in the front. Yes, it is impossible to sit down before scenery such as I have humbly endeavoured to describe without reflecting upon "the why and the wherefore," and striving to learn some lesson from the riches of the heights and depths of created Nature. I shall hope hereafter to speak of other scenes in my late tour, and trust they will recall to many who have gone over the same ground, the degree of admiration they experienced during their sojourn amidst the mountains.

With the exception of the figures (and there were several looking over me while sketching), I have given the most simple and truthful representation of the hut and scenery that I possibly could. Not one stone has been added, and, I may say, not one has been omitted. Everything was carefully drawn with the black-lead pencil, and with some power of line, because, by so doing, less time would be spent in colouring. There was the place of everything; and every change of tint found its place most readily, and without hesitation. Even the sky was pencilled as well as the mountains and mid-distance. The road and its accompaniments, the grass and its undulatory character, were strictly drawn with the pencil. The large grey stone by the side in the second portion of the road was blasted and cut, as it completely stopped the way, so that *it* is a correct portrait. It is very remarkable that in no one instance in this locality, did I perceive the roofs grown over with moss or grass of any kind; while in almost every other spot this is the general accompaniment of a cottage roof.

The colours employed were—for the

Sky—Light red, a little sepia, and indigo.

Mountains—Light red, a little sepia, and indigo.

Middle Distance—Lake, sepia, indigo, and yellow ochre; the first tone being of yellow ochre, lake, and a very little indigo.

The Hut—Sepia, indigo, lake, gamboge, yellow ochre, in different proportions, sepia being the preponderating colour.

Grass—Gamboge, burnt sienna, and indigo for the warmer tints; gamboge, indigo, and a little sepia for the cool tints.

Deep Touches—Gamboge and sepia, throughout the foreground and building.

The whole of the colours are to be applied without any subsequent washings off. The time to be occupied in making such a sketch, out of doors with the like degree of finish, should be from three to four hours; but if the careful outline with a black-lead pencil is not patiently carried out, five or even six hours will not suffice to produce a finished result.

THE DRAMA.

THE theatre is a strange domain, bounded as it is on the one side by literature, and on the other by showmanship. The inhabitants of the theatrical region are equally various, and range from poets and scholars to posture-makers, mummers, and showmen. Though there is never any absolute contest between these opposite personages, yet there is a great flux and reflux among them as to the possession of the stage. It must be confessed, however, that the showman's party are in the ascendant; and they have contrived to enlist on their side a good deal of art and talent, if not absolute genius and poetry. The theatrical season has set in with unusual severity; and the love of public places, if not a love of the drama, fills every theatre. Philosophers of the old school have speculated on the cause of the decline of the drama, and the rise of the taste for theatres. What they call the decline of the drama, is an unwillingness to hear a good deal of fustian that formerly passed for heroic poetry; and a mass of didactic spouting intermingled with a caricature of character. There is scarcely a play of the eighteenth century—except the "School for Scandal"—that will outlive the nineteenth century; for the increasing good sense of the nation will not put up with the shams and pretences of a former age; there being always plenty of them in the present time, whenever that may be. The drama of Shakespeare—not the Shakespearian drama—in his half-dozen great acting plays, will last as long as a religion; though, by turns, like certain lighthouse lamps, it shows an increasing and diminishing lustre.

The theatre has, in truth, but little to do with the past, and is essentially of the present; for, as the purpose of playing, both at the first and now, was and is "to hold, &c.," of course, it was to show things that are, and not to merely speculate on things that may be. The passions of the three or four popular heroes of Shakespeare are essentially of the present, as much as any Irish sailor or old jockey of Mr. Boucicault's. The stage, however, has more of reflex than Shakespeare's famous definition infers, and reflects things as well as morals; and the mirror that is held up to the present public must show chairs and tables, and exact costumes, and rooms and actualities of all kinds; and cares very little about the features of virtue, or the images of scorn. It wants facts, or appearances it mistakes for them; and as people will run to see panoramas and views of places they know, and do not care for those they do not know—rejoicing at views of Greenwich and Richmond, and neglecting the finest delineations of Timbuctoo or the Nyanza Falls—so they like to see every-day realities presented to them. When we analyse this taste, we cannot but pronounce it childish and barbarous, being very like that of the savage, who is never weary of poring over the reflections in the first looking-glass placed in his hands. Such persons are fond of the reflections they see in the mirror; but these minds produce no new reflections in themselves. So it is, however. And not only to the vulgar—which generally means the poor, though it includes a large portion of the rich—does this assertion apply; for the elegant people in the stalls are no whit before the roughest youths in the gallery, in delight at gaping at the imitative scenes on the stage. A real pump with real water is to all a joy; and a real horse, or even a real donkey, a dear creature they could fondle. This being so, it comes then to the question, for what do people go to the theatre? and the answer must really be, to get away from home, and to see and be seen. We are gradually becoming more of an out-door people; and the uneasiness and dulness of home are beginning to be oppressive. Pater-Familias long ago found it so, and took himself to his ancient tavern: now seeks his modern club. The sons soon followed, some going to the casinos. Mater-Familias, at last, revolted, and the incipient maters of course followed; and stalls being timely invented at the theatres, they, too, were emancipated from the ever-wearisome routine of home. The multitude, without waiting for their betters, had invented the music-halls, whereto whole families thronged, and avoided the dull homilies of home existence. Having thus, after some hundreds of years, come out of our hives, and tasted the delights of company, noise, and lights, we seem inclined to take our fill; and, we believe, the thousands who seek for an evening's amusement are very indifferent whether it be a music-hall, a theatre, or, to speak without profanity, a popular chapel, they frequent. They are contented not to be at home; and are very little critical as to what they see and hear. Such being the taste of the audiences, so must be the kind of fare presented to them. If it be good, it is owing to the better taste of the providers; if it be bad, it is because the public is so uncritical and indifferent; and, as regards art, so ignorant that it will put up with anything.

We have been lured into these introductory remarks because the facts stated lie at the foundation of our criticism upon them. The action on and reaction from audience and stage are equal. Each must regard the other in some degree; and the seller must seek to please his customer. We have now fifteen theatres and thirty music-halls, besides many concerts and other resorts, opened for the entertainment of the British public; and we are told, and truly, that even these do not suffice to amuse the monstrous mass that nightly craves for fresh entertainment.

We will take a cursory view of the theatres, leaving other entertainments out of the inquiry; and we cannot do better than take them in the order in which they opened for the season. As some of the smaller stars first begin to twinkle in the twilight, so the outlying theatres first open in

the theatric season, which may be said fairly to commence in September.

The new Surrey Theatre, which is a monument of how little people really know of their own business, opened early in September, the Upper Gallery and a greater part of the Upper Boxes having been rebuilt, as it was found, after the theatre was opened, that half the people in this portion of the building could not see the stage. This blunder having been rectified, the managers tried to rectify some of their own mistakes; and finding that grandiloquent Byzantine dramas did not interest the public, they purchased (not of the author, but of the committee of the Dramatic College) the grand Prize Naval Drama, which had obtained Mr. T. P. Cooke's singularly absurd prize of one hundred pounds. Mr. Slous, known as the author of some half-successful blank verse and otherwise blank dramas, after the old model in five acts, was the winner,—not fortunate, we should say,—of the £100, because the drama went to the benefit of the Dramatic College, and the price of a very long four-act drama, which has any success, has not yet come down to £25 an act for entire copyright. Mr. Boucicault's lowest price, out and out, is £4,000, as we have been told. The piece thus curiously introduced to the public is entitled, "True to the Core," and represents a thoroughly sentimental and theatrical sailor of good Queen Bess's time. As, however, he wears trunks and a tunic, instead of trousers and a blue jacket, he is not so popular as sweet William. Nevertheless he is so actively engaged against the Spaniards and other Popish invaders; utters so many virtuous sentiments; is so thoroughly self-sacrificing; and is acted with so much energy by Mr. Creswick, that he makes way with his audience in spite of his outlandish-looking dress. Whoever expects that the play-bill, which is full of grand historic names, leads up to any new or even old illustration of the destruction of the Great Armada, will be woefully disappointed; and they must wait till Mr. Froude arrives at this period of our history for a full elucidation of this momentous event. There is an effect of sea, however, which is worth seeing; and "the mirror" is otherwise "held up" to certain costumes and facts after the approved modern fashion. As this piece still keeps in the play-bills, we are sure that it is a treasury success.

On the 1st of October the great Drury Lane Theatre recommenced operations under the sole management of Mr. F. B. Chatterton; and with the same firm adherence to what its admirers call the legitimate, historic, or Shakespearian drama. Mr. Phelps is still the chief tragedian, or rather comedian, in the old poetic sense of the term as defining an exemplifier of human nature, both on its serious and its jovial side. He seems not to be imbued with the rancorous jealousy supposed to belong to theatrical monarchs; for he allows many not only to come near his throne, but to occupy it. Thus Mr. Swinburne alternated chief parts with him last year, and now Mr. Barry Sullivan, returned, after a five years' absence in Australia, has alternated "Macbeth"; also playing Falconbridge in "King John." This gentleman has not improved; has not retrograded; though he is more laboured in his utterances, and seems to suffer from a throat attack. His figure is commanding; his attitudes impressive; and could Shakespeare be acted without speaking, he would pass for a fine delineator of his characters. He has, however, again passed away, and needs no lengthened examination. Another Macbeth has immediately arisen in the person of a Mr. Talbot, new entirely to the London stage, but popular in the North. This gentleman is remarkable for marked idiosyncrasies, which give an appearance of some originality to his performance. Neither his "business" nor his readings are new; but he has a decisive kind of earnestness, sometimes expressed in vehement gesticulations, which recall the delineations of actors of the pre-Kemble school, and which may be supposed to have had their rise from the Garrick fire and energy. They seem a trifle old-fashioned now, but certainly smack more of the Kean than the Macready modes. Altogether, Mr. Talbot has a downright style and a voice that speak of the strong will and determination of the North. Amongst other performances which have challenged criticism is Mrs. Vezin's (Mrs. Charles Young) depiction of the sorrows of the Lady Constance in "King John." It has gained much applause from the audience and other admirers, and doubtless it has force and feeling; but it lacks the solemn grandeur and proud supremacy that should belong to it. We see none of that grandeur of grief which dwarfs kings and conquerors and all things earthly, and sits upon the earth as a supreme Niobe, who typifies the fate of all mortality. The mode in which the great middle-age plays are got up here is excellent in scenery and supernumeraries; their armour looking real and not new, and their bearing being in general martial and effective, though now and then a few of them of the worst-dressed kind will linger and bring ridicule upon the rest. The Siege of Angiers, and the costly paraphernalia of the Pope's legate; and the admirable view of the exterior of Swinstead Abbey, with its cold blue marshy mist, are admirable stage arrangements, and were never executed better, if so well. Before we are published, but not ere we are printed, the grand mystical, philosophical, and magical play of "Faust" will have been produced, so that we can only refer to the extraordinary efforts of adapter, scene-painters, costumiers, mechanists, and musicians, to make it one of the most striking plays ever produced.

The Haymarket, which boasts itself as the home of legitimate comedy, although it ran for some six hundred nights a most illegitimate comedy, opened with Colman the younger's old-fashioned comedy of "The Heir-at-Law." Possessing a little more of general human nature than these old pieces commonly do, it is not quite so removed from the present as many of them; and thus not so repugnant to modern tastes. Its production was cited as a proof of the lasting nature of the drama of its

period; but it remained only three nights, and then was succeeded by Mr. and Mrs. Charles Mathews, and the dramas specially concocted for them. Such is the swiftness of time, and his rapid destruction of novelty, that the young critics are crying out that the joyous Charles wears hats, stocks, and trowsers of a past age, and notwithstanding his airiness, is evidently getting behind this age. There may be some truth in this; but no time can destroy, until he is utterly incapable, the exquisite taste that marks all he does on the stage; or dull the vivid intelligence that enables him to indicate a thousand humorous notions; and by a wave of the hand and a slight intonation of voice to depict character and produce a situation. Mrs. Charles Mathews depends on qualities which time will find more assailable; but which are not diminished at present. A new comedy is promised, and what is thought more important, Mr. Sothern will appear at Christmas; but the Dundreary mania has greatly subsided.

The Adelphi, with its extremely easy-going management, opened with a sloppy rendering of an Olympic piece, in which Miss Kate Terry appeared, and looked very much like a piece of rare Dresden china amongst rough kitchen utensils. Not that the Adelphi does not possess some excellent performers in Mrs. Mellon, Mr. and Mrs. Billington, &c.; but the rough style of doing everything lately at this theatre gives a coarseness to the general performance. A new piece, in four acts, from an unacted French piece, has been produced for Miss Terry, in which she enacts not the breaking but the disease of a heart. There is a rough purport in the play to show the brutality, vulgarity, and cruelty of mere moneyed people, and the suffering and misery of the truly refined and delicate. This purpose, however, is shown in too coarse a style; and in manners and circumstances foreign to our general proceedings. A political allusion to Hyde Park riots, put into the part of a young actress by herself, as it appears, from Mr. Webster junior's letter, caused a great opposition on the first night, and was very nearly creating a "regular row."

The fortunes as well as the management of the Lyceum Theatre have been entirely changed, Mr. Boucicault becoming the real acting manager. M. Fechter indeed still remains the responsible lessee; but he does nothing but receive a large share of the profits. It is a strange power Mr. Boucicault has of going into a theatre and taking its government entirely into his own hands, bringing out a piece of his own, and pensioning off the actual lessee. He seems to be doing with his new play of "The Long Strike," at this theatre, what he did with the "Colleen Bawn," at the Adelphi—benefiting the manager in spite of himself, and making his own fortune. The piece itself is clever, and is very well acted, especially by Mr. Emery and Mr. Widdicomb; and the "Irish Sailor" (surely an anomaly) by the author-manager (Mr. Boucicault) is much liked; as is the gentle acting of Mrs. Boucicault. This piece is very good of its kind; but its kind is not good, though outrageously popular. We have not space or time just now to analyse or describe its qualities. The dramatic mirror here holds up to intense admiration the accurate reflection of the interior of a telegraph office, amongst other actualities.

The Princess's Theatre continues "The Huguenot Captain;" but has also revived a three-act comedy of intrigue, entitled "The Triple Alliance," adapted some three years since by Mr. Oxenford, from a comedy of Scribe's.

The Olympic, after an interregnum, in which all sorts of drama were enacted, has re-opened under the regular management of Mr. Wigan, with a very feeble Irish piece, called "The White Boy," by Mr. Tom Taylor. It turns out that it is an early production of that clever dramatist, produced in rivalry to the Irish dramas so lately successful under Mr. Boucicault's management. If there be any truth in this, it is the strangest kind of avengement we ever knew; for it can but injure its author and its producers. From its stagy commonplace, clumsy verbosity, and inaccurate allusions and actualities, it was wittily described as "an anti-Boucicault" piece—the last-named author having certainly put melodrame on its legs, and taught it to use them properly.

St. James's Theatre, which moves in a somewhat remote orbit, has pursued under its tasteful manageress—Miss Herbert—a renewal of the last century comedies, and by her elegance and care makes them endurable; being very well seconded by Mr. and Mrs. Frank Matthews, Mr. Walter Lacy, and altogether a good working company. The weak though sprightly comedy of the "Belle's Stratagem" is the last new experiment, and is attractive and amusing.

The little Strand Theatre sticks to small, very small, comediettas, and to frolicsome burlesques. The novelty is one of these last-mentioned pieces by Mr. Burnand, who has the greatest talent of any modern dramatist for making utter nonsense amusing to a large number of persons. He is not truly satirical: he does not parody: he does not invent; but he is simply absurdly frolicsome, and leads his audience into the same nonsensical mood as his own animal spirits seem to carry himself. All that can be said for this childish kind of drama, is that it is pure as well as childish, and is free from grossness; or if the last is imported, it is done in the acting and not in the writing. Were it not simply foolish gaiety, it would be hooted from our theatres. The last subject is "Der Freischütz," which is befooled to the utmost.

The Prince of Wales's Theatre, which, under the management of Miss Marie Wilton, the guidance of Mr. Henry Byron, and the writing of Mr. T. W. Robertson, has taken a higher stand than any of the other smaller theatres, opened with a new comedy by the author of "Society"—Mr. T. W. Robertson. It is named "Ours," and its *dramatis personæ* consist principally of officers of a crack regiment, who are, however, more engaged in making love than war. Mr. Robertson has the ambition of a literary man, as well as of a successful

play-writer; and the consequence is, he seeks to produce works of literary art, as well as telling theatrical pieces. His love of effect is, however, as great as his taste for the mental; and he is as far removed from the literary man's usual notion of dramatic writing as any sensational dramatist that ever drew down the applause of an audience with a real brick wall or a veritable gas-lamp. He has a good deal of satiric power, and the common sense that belongs to it. His characters always act like veritable and every-day human beings; and say and do no more than is necessary for the action of the drama. He knows, however, that they must also interest, and he contrives to give them a smart and sometimes an eloquent utterance. It has been said they talk "good drawing-room chaff," and they do. He is also ingenious in placing his characters so as to bring out his story; and, indeed, manifests much dramatic talent. He is what a hundred years ago would have been denominated "a very ingenious writer," meaning thereby extremely clever and judicious. "Ours" is a pleasant as well as clever production, and has so much geniality, and is so comparatively true to modern life, that it cannot fail to be popular with those who still expect in a comedy some dashes of wit, some new portrayal of character (exteriorly at least), and incidents so well put together that they interest. Mr. Henry Byron, now become the manager of two Liverpool theatres, has given a new burlesque to this theatre, which is also founded on the opera of "Der Freischütz." It is more of a parody than Mr. Burnand's, and is both better and worse on that account. It is not, however, one of Mr. Byron's best productions, though his facility of word-splitting and echoing sound is still manifest.

The great theatrical event of the season, however, has been the opening of an entirely new theatre in an entirely new region as concerns theatres. The "New Holborn" has been successfully built and opened by Mr. Sefton Parry. It is a very pretty and commodious building, accessible and airy; and comprises all the latest stage aptitudes. It opened with a four-act melodrame by the ubiquitous Mr. Boucicault, who seems ready to provide the whole world with plays. It is called "Flying Scud," and in the first two acts interests by the fate of a famous race-horse being involved. This equine hero is pursued by black-legs, and preserved by a faithful 'cute old jockey; coming in triumphant for the Derby. With his success the interest of the piece dies, though the lovers are still persecuted, and the human hero is robbed at cards, engaged in a duel, and subjected to a variety of the usual mishaps that occur to sensational heroes. It would seem that the manager's aim is to make his new playhouse, with regard to the Holborn thoroughfare what the Adelphi is with regard to the Strand. It will take time, talent, money, and perseverance to succeed, but we have reason to believe Mr. Sefton Parry is provided with all these requisites; and we heartily wish him success.

We have still left a few outlying of the fifteen theatres now open unnoticed; but we must make a special circuit in their exterior orbits. The inveterate playgoer will not need to be told he will find sensational pieces at Astley's and the Victoria. In the opposite extremity of the town he will also light upon, at the Grecian, a very well-contrived piece; and Mr. Anderson, the tragedian, is at the City of London. At Sadler's Wells, Miss Marriott still with unceasing energy and much merit plays the high poetical drama; and will shortly appear in Shiel's "Evadne"; although we would rather see her in Beaumont & Fletcher's character of the same name in the play modernized as "The Bridal."

THE INFLUENCE OF CHALK ON THE GROWTH OF THE FIELD LUPINE.

By P. H. Frere, M.A., Editor for the Royal Agricultural Society.

THE design on the opposite page is given to illustrate the influence which an uncongenial element in the soil may exert, and the difference in growth which it may cause in plants sown in the same field, on the same day, under the same conditions—barring small casual variations in the soil.

The blue field lupine came to us a few years back, with a high introduction, from the sterile sandy plains of North Germany, as a plant which would grow vigorously on the poorest lands, bearing a rather bitter seed, which animals soon learned to like, or in its green state affording abundant produce to be either eaten by sheep or ploughed in asmanure.

Various farmers on the reclaimed warrens of Norfolk, Suffolk, and Surrey, have reported most favourably of its growth; with others it failed most unaccountably.

About seven years ago, when Baron Nathusius, president of the Prussian Agricultural Society, brought this under our notice as a field-crop, I tried a large piece, which failed utterly; I then hinted at a chalky subsoil as being the cause of the failure, but certain scientific authorities would not accept the explanation. This year, some of my farmer neighbours were all agog about the plant—it had just cropped up as a novelty in their field of vision—and I said to them, "Try it by all means, and choose as sandy a bit of land as you can find, but '*Ware chalk.*'" The district has much heath-land,

black or brown sand on the surface, but an uniform subsoil of chalk.

My neighbours' lupines have long since been ploughed up as failures.

My own farm manager shared the impulse, and got leave to try a little bit (about half an acre) with the injunctions aforesaid. The plot he selected had generally 8 or 10 inches of blackish sand above the chalk, but the plough occasionally grazes the chalk rubble. The plants sown in May generally came up well, but, as generally, turned yellow, got stunted, sickened, and often died. Since, however, the crop was sown for the sake of experiment, not profit, it was left standing, to see what would come of it. When I looked at the plot in the end of June, I remarked, at the further part from where I stood, two or three narrow streaks of a dark green hue, which, from their dissimilarity to the rest, I mistook at that distance for couch-grass. When set right on this head, I said, "Then, depend upon it, these are narrow veins of deep sand;" and the spade next morning showed that I was right, going down three feet through sand at those spots without reaching the bottom of it.

Experience in trenching ground for plantations had previously called my attention to those sandy streaks which fill narrow parallel channels, probably the last puny crasions made by the once mighty waters as they receded from the great marine formation of the chalk. The tall specimen in flower was gathered Sept. 6th, from one of these sand-streaks; dwarf, sickly, half-dead specimens, such as those which accompany it, may be pulled up all over the field, even within one or two feet of their well-grown kindred; yet, to judge by the surface, the whole field is one of black sand.*

These illustrations will, I think, set forth better than words can do, the great antipathy which this plant seems to have for chalk, either as a subsoil or as forming a very slight admixture in its seed-bed. Such great sensitiveness is generally an attribute of animal rather than of vegetable life, and, among animals, belongs rather to the higher than the lower classes; and further, to the more refined type rather than to the more hardy, homely tribes of the highest of animals—man. Yet this offshoot of the German Flora, which came to us with a character for "rusticity," as the French call it—as a sort of maid-of-all-work for the poor-land farmer—without finery, without "*die Englische whims*" (vagaries which, according to our German neighbours, none but the native word can adequately represent), turns out, in respect of chalk, to be as sensitive as any fine lady,—nay, she might possibly stand even Hans Andersen's "Princess-test," and be discomposed if one single pilule of chalk were inserted three or four inches deep in her bed.

* Small *pockets* of remarkable depths in comparison with their diameter, were in like manner scooped out of the chalk in places by the *eddy* of these waters, and similarly filled up. The black sand is, probably, a later and independent deposit.

MUSIC AT HOME.

MR. ALFRED MELLON holds at the present time undisputed sovereignty over musical London. Opposition is temporarily defunct, orchestral conductors are still out of town, and the stars of the vocal hemisphere wander in touring troupes through the pleasant places which lie between the North Foreland and Penzance. Even as Alexander Selkirk was undisturbed by any rival claimant of tropical territory, the king of the Promenaders looks abroad, and finds the concert field his own. It is true the black-leaded minstrels of Christy still ask their doleful riddles, still sing their dismal songs, and still bewilder the public with contradictory declarations of legitimacy. Very small concerts are also occasionally heard of in very large suburbs; but these fitful gleams merely serve to make the succeeding gloom more profound, and, excepting at Covent Garden, Euterpe sleeps soundly under the veil she put on at the close of the season. No mistaken individual ventures upon a short term of English Opera; no five thousand school children sing the good old minim psalm tunes in the Handel Orchestra; and no chosen "six hundred" lull subscribers to sleep with the *Messiah*, the *Creation*, and *Elijah* in wearying succession.

Music must have its vagaries, and Euterpe aforesaid no sooner breathes freely after wrestling with one nightmare, than she is called upon to gather up her classical drapery and do battle against some other apparition. Audiences, that is to say, the shilling section thereof, tire of adult performers, and require the occasional stimulant of a juvenile phenomenon. That questionable blessing is always forthcoming; and the noble British public is forthwith moved to extravagant demonstrations of delight in honour of mediocrity in short petticoats, or in boyish habiliments, as the case may be. One phenemenon unfortunately makes many, and, after a sensation of this undesirable kind, we must be prepared to find specimens of musical precocity springing up on all sides. Precocious talent is all very well in its way, but is better adapted for exhibition in family or private circles than in public assemblages. A certain amount of rawness and crudity is to be reasonably anticipated in the performances of juvenile prodigies: but it is none the more pleasant to hear when the prodigy takes some unfortunate classic in hand, and noisily pounds all the soul out of his music on a "concert grand." It is certainly neither unfair nor inopportune to ask how the dignity of sterling music can be upheld in the exhibitions made by modern juvenile pianistes or pianists of the present day? In the compositions of Beethoven, Mozart, or Mendelssohn, what can

compensate for the absence of that "soul" or expression which is their great characteristic, and in executants of ten, twelve, fourteen, or "some sixteen summers," how can that intensity of feeling be expected? If pianoforte playing be simply a matter of digital dexterity, then are the performances of some recently discovered instrumental stars faultless; but individuals yet abound who are not transported to the seventh heaven by mere mechanical execution, or strength without quality of tone. Absence of mind is common enough in everything—pianoforte playing included,—but is much to be regretted in the latter department of musical art. A "Mdlle.," native or foreign (for plain English "Miss" is now an obsolete barbarism), may play with forty-metronome-power regularity, and at an express pace, but this is not sufficient in the interests of music, however efficacious it may be in securing applause. The comparative absence of expression, which quality is as rare in young instrumentalists as four-leaved shamrocks are in Irish meadows, is easily accounted for. Until the feelings and passions of an individual are matured and developed, he cannot enter into the spirit of music, or poetry written by one who has attained that period of existence. A girl or boy of ten years might be taught to sing Beethoven's "Adelaida;" but a young man or maiden of twenty would give a much better reading of that immortal love song. Nature does this much, and upon Nature we must wait.

The changes have been frequently rung upon juvenile performers during the last two or three years, and Mr. Alfred Mellon has generally been able to satisfy this craving of the public. He gave us Mdlle. Marie Krebs, and she gives us Mendelssohn's Capriccio Brillante in B Minor in her own peculiar manner. Mdlle. Krebs is fêted beyond all reason, and it is to be hoped will not allow herself to be carried away by the ridiculous applause which seems to have grown into a fashion. So clever a pianiste may be reminded that rapidity is not everything desirable; and that mere gabble is objectionable even on a pianoforte. Contemporary with this prime youthful favourite there have been, Emilia Arditi, and Bertha and Emma Dreschler Hamilton, violinists; Master Bonnay, xylophonist, and Mad Tom, the sable pianist. These are independent of certain leaders of the opposition at less pretentious places than Covent Garden Theatre; for the Oxford-street Hall of Music has its young xylophonist, by name Delepierre, and her sister devoted to the violin. Touching the latter instrument, Mr. Alfred Mellon's youngest professor thereof—Master Emile Sauret—is a shining instance of genuine and premature talent. From the mass of mediocrity sometimes emerges a specimen of real cleverness; and of all the benignant Mellon's *protégés*, Master E. Sauret is the best.

Classical nights on the old principle, when one composer's works fill the first part; mixed classical on the new plan, when homage is done to several stars of bygone days; together with German, Gounod, Verdi, and volunteer festivals have alternated. Levy of the cornet-à-piston has returned; Signor Bottesini has done likewise; Mr. C. Coote has produced a new valse; Herr Meyer Lutz's "Lemuel" waltz, now withdrawn, has been much and justly admired. It is unconventional, and the more refreshing that its best strain does not come first. Mdlle. Carlotta Patti's attempts at ballad-singing have been accepted with more satisfaction than ever. Mr. Harry Sanderson's name is last "on the blazing scroll of fame," as a pianist, and is likely to remain so, especially while he plays his own arrangements. He is not singular in putting such a lovely melody as Bellini's "A te, o cara," to the torture on a pianoforte, and completely destroying its vocal character; neither is he alone in sacrificing pathos and tenderness to a coarse kind of "noise and fury signifying nothing." Those who astonish the masses will inevitably please them at the same time, and the creed which certifies, as the best players, those who make the most noise, has still many believers. Madame Patey-Whytock, one of the most legitimate singers of the day, will find her position more secure from her sojourn at "Mellon's." Mr. Henry Corri is again in the concert world, and will appear in the conductor's new operetta at Christmas.

Mdlle. Sophie Angeline, a feminine flautist, played on September 15th; and on the 17th, Herr Wilhelmj, a violinist of extraordinary acquirements, made a "very palpable hit." Little Emile Sauret performed Mendelssohn's violin concerto, from memory, on the 20th. Some comparatively unknown compositions have been introduced on the classical nights,—Mozart's Fugue in C Minor, for stringed instruments, to wit, and the promenaders are conciliated with a new selection from *Mosé in Egitto*.

The lyre of Sydenham is no longer silent. Apollo Manns commenced a new series of winter concerts on October 6th.

At Drury Lane *The Beggars' Opera* has been revived; Mr. W. Harrison, whose strong point now appears to be robust comedy, being the Captain Macheath, and Madame Jenny Bauer (with a ridiculous variation upon "Cease your Funning") the Polly Peachum. We are informed that Her Majesty's Theatre will open this month for a short opera season, with Mdlle. Titiens and Mr. Santley as leading stars.

POEMS,* BY ALFRED B. RICHARDS.

THERE is a thorough-heartedness about Mr. Richards, which will come home to every reader of his poems. On the other hand, critics cannot help noticing his imperfect execution of many good conceptions. His leading lyric is clearly overweighted by its name; for *Religio Animæ* suggests a strain of intense sublimity, and not a mere song of the affections, however charming it may be. A poet feels the life of the soul so strong within him, that he cannot doubt of its independent existence; yet his nervous temperament makes him peculiarly liable to fits of despondency, and nothing is more likely to bring them on, than an hour in a circle of Realists. This sore trial, we imagine, has been endured by Mr. Richards; and, on returning to the gods of his own hearthside, he has poured forth his feelings in pure, sweet verses. But it requires a deeper voice than his to chant the *Religio Animæ*. His best quality, we repeat, is thorough-heartedness. This is eminently displayed in his ballads; but none of these are short enough to be quoted entire, and their merits are not of a kind to be fairly exhibited in extracts. "The Convict's Escape," for instance, is effective as a whole. It tells of a Frenchman who has escaped from the galleys, and who begs for shelter and food at a poor cottage. The peasants themselves are starving; their son has been carried off by the conscription; and their youngest grandchild is at the point of death. The convict forces the grandfather to lead him back to prison and claim the reward. The scheme is discovered, but ultimately pardoned; and the cottagers annually keep the day in honour of the convict, but remember it also as the day when their little François died. The homely pathos of this story is heightened by its artless style: yet its texture is plain, perhaps to a fault, and supplies the journalist with no *purpurei panni* for excision. In the "Message of Circassia," and in "Pipeclay and Bunting," the author rates Old England soundly for deserting the cause of freedom abroad, and for neglecting her own soldiers. He makes eloquent appeals to her, also, both in verse and prose, on behalf of the suffering poor, and throughout all such passages he speaks like a warm-hearted son, a man of mettle and feeling, who would be the last to disallow the merits and claims of his native country. But he is not without other moods of the mind. Two of his poems were written in connection with the designs of one of our finest artists, Mr. Frederick Sandys; these are "Danäe," and "Helen and Cassandra." Now and then, too, after the fashion of all poets, he indulges in reveries, for mere delight in melancholy music. We had marked some of these for quotation, such as, "Would I might fall asleep," or "Pale Memory is Mine;" but after all, we prefer turning to a poem in which delicacy of rhythm is combined with pathos. The following are two of the opening passages of "*La Jeune Fille et la Mort*":—

"In a low and squalid room
Darkening in the twilight gloom,
With one broken lattice small
Peering through the sullied wall;
Near which tall and spectral trees
Shiver in the chill night breeze—
Such as, by some mansion lone,
Linked with Murder's tale have grown—
Sleeps a young girl wearily;
O'er her wan face flit strange fears,
The ashen trace of tears
Defiles her hollow cheek:
In disordered dream
Her light tresses stream
All about her pillow;
Not in fairy freak,
But like the heavy willow
O'er a pool of woe:
Sad it is to see
Her neck's sharp tracery
Shadowed deeply so
By the dim light in the room,
Like her, dying into gloom.

Suddenly the moon stole there,
Threading fast her shadowy hair
Into silver brightness rare,
Mist-like floating with soft grace
Round her wan and pearly face;
And I saw a bright red streak
On her eyelids, on her cheek;
But her lips were pale and lurid,
As a Lily from the earth
Sprung in slow and sunless birth;
All in dark, cold shadows buried:—

Then I knew the poor girl's doom,
Fading early to the tomb."

She awakes and sees Death, in visible shape, standing beside her,—

"Then the flutter of her heart
Hurries into beating;
With a dull and muffled sound—
Each stroke a hunted creature's bound,
And her quivering lips apart
Into sculptured anguish start:
In the pale moon's chilling beam
You might have seen her bosom striving,
Like your own, in fearful dream,
Or a snow-wreath tossing, driving;
And her breath so fleeting
Might be heard, in choking sob and cry—
'I am so young to die,
Too young to die!'"

At the close of the poem she becomes resigned; the grisly phantom fades away, and she dies in peace.

We conclude with a little piece, which is a choice specimen of art. It is an easy matter to mimic the turns of speech, but it is a positive feat to think the thoughts of our ancestors. Whilst the revival of learning was still fresh, the images of classical mythology were more to the poet than pretty figures of fancy. Old Chapman, the stately

* "*Religio Animæ*, and other Poems." By Alfred B. Richards, author of "Crœsus, King of Lydia." London: Edward Moxon & Co., Dover Street.

dramatist, and translator of Homer, might have written such lines as these; their language may not be correct to the letter, but their spirit is the very spirit of the age, when poets actually felt the presence of the nine Muses, quickening the atmosphere, and stirring the sap in the bay-trees. They are appended to fifty stanzas on the characters of Shakespeare, and are entitled, "His Prayse."

"Fayre Wisdome's Bridegroome, married to her yong,
That dry'd the inke, wherewith he wrote, with sand
Shedde from the houre-glasse of admiring Time.
His birth alone had stamp'd the nation great
Where he was nurtured; for indeed he was
Humanitie's bright essence. None e'er lived
Compeere to him, or will; for he made all
His owne, that is. Eche moneth he lay within
His mother's wombe, a severall Muse did beare
Her sweetest eompanie; thus was he framed
To such nice sympathyes; and on the daie
He first did stretcho his dimpling finger tow'rd
Earth's waving flow'res, Apollo left his throne
To visit him and kisse his smiling brow
In seale of promise. That yere laurells bloom'd
Before their time in this our Britain's isle."

REVIEWS.

Ferns: British and Foreign. Their History, Organography, Classification, and Enumeration. With a Treatise on their Cultivation, &c. By JOHN SMITH, A.L.S. (London: Robert Hardwicke, Piccadilly.)

MR. SMITH'S work is as exhaustive as its title is comprehensive, and cannot fail to be a most acceptable boon to all those who interest themselves in the history or cultivation of the charming and interesting family of plants under consideration. The ample opportunities enjoyed by the author whilst curator of the Royal Botanic Gardens, Kew, coupled with a faculty for close and accurate observation, have well fitted him for the laborious undertaking which he has performed so well. The numerous descriptive cuts are clear and well executed, whilst an index framed expressly to relieve the mind of the student of the difficulty too often caused by synonymes is given. The adventurous plant-hunters, the pioneers in the noble science of botany, are not forgotten, although it is much to be feared that many of their graves beneath the feathery palm and plume-like fern they loved so well are too often allowed to become forgotten spots. Few are there who so boldly venture forth penetrating the fever and ague-stricken morass, the wild mountain ravine, and the dense jungles of the Tropics so courageously as the wandering plant-collector; and few lands are there, from the frozen north to the Torrid Zone, where he has not levied tribute and gathered floral treasures. The results of the united labours of such adventurous men, when carefully analysed and embodied, form the basis on which such books as Mr. Smith's are founded, and we cordially advise all lovers of ferns or their culture to read that which he has written.

Guide for Travellers. In the Plain and on the Mountain. By CHARLES BONER. (London: Robert Hardwicke, Piccadilly.)

A LITTLE work replete with useful suggestions and practical hints on mountaineering. As long as rugged crags, fissured glaciers, snow-capped peaks, and giddy ledges exist, so long will adventurous travellers be found amongst them. An uncontrollable desire appears to exist in the breast of almost every male member of the human family to scramble up something or somewhere. From the truant school-boy who denudes his waistcoat of buttons, destroys his trousers, and scrubs out the toes of his boots in pursuit of the eggs of jackdaws and starlings, artfully concealed in the ivy-covered nooks of some insecure old ruin, to the vacation tourist, travelling nobleman, or wandering hunter naturalist, the same instinct prevails. The author now before us is evidently an accomplished cragsman and cliff climber, delighting to perch bird-like on points of rock, and treating a goat-path a few hundreds of feet up the mountain much as if it were the "Queen's highway." Still there are passages in Mr. Boner's book which serve to show how slight the tenure is on which life is held amongst the solitudes, "the home of the chamois." We give one of them in the words of the author:—

"Some rocks are very brittle, and cake off as easily as mortar from a wall: such are very dangerous, because so deceptive and unreliable. They give way at once, on the least pressure. You see some small projections on which to plant your toe or the side of your foot, and so enable you to climb higher, when as soon as your whole weight is brought to bear on it, a flake of stone comes away beneath your tread." "Before relying on some bit of rock, try it; for if it give way just as you are stepping upward, you cannot tell how serious may be the result. You may also have occasion to lay hold of some projecting crag to steady yourself in passing a difficult place. Such a great piece of rock is, you think, firm enough; and as to its giving way, there need be no fear about that; but, despite its large proportions and seeming stability, it is as treacherous as the smaller points, which, like needles, scratch your fingers in touching them. At the very moment when you most want the steadying support, it will loosen in your grasp, and come tumbling down over the rocks. Fortunate for you if it do not strike you in falling, and carry you rolling along with it. Never trust limestone rocks." For our own parts, we most faithfully promise Mr. Boner that we never will.

We are informed also, that, "sometimes rocks are flat and smooth like large slabs of stone. When sloping, it is difficult to walk on them, and the nails in your shoes add to this difficulty. Take off your shoes and walk across in your socks, and all danger vanishes at once: you go as easily and safely as across your room."

Mr. Boner's little volume is embellished with several very well executed cuts, which serve to show the best modes of surmounting the difficulties described. The hints there given are the result of long and practical experience. We therefore confidently recommend a perusal of it to all those about to grasp the "Alpen-stock," and shoulder the "Rücksack."

MR. CHARLESWORTH'S TRANSPARENT-COVERED COLLECTION-BOXES.

We have just received from Mr. Edward Charlesworth, Secretary of the British Natural History Society, Whittington Club, Arundel Street, Strand, two admirably-arranged cases of specimens,—one containing shells of the Channel Islands, and the other fossils illustrating the "Crag Formation." In their arrangement, advantage has been taken of Mr. Charlesworth's transparent-covered boxes, which, as depositories for minerals, shells, insects, or objects of antiquity, are perfection itself. Each box being *floored*, so to speak with soft wadding, the specimens travel with the greatest safety, and can be readily examined without removing the cover. In an educational point of view, collections such as these are of the greatest value, as every specimen is plainly and correctly marked, and serves as a faithful and reliable guide in the classification and arrangement of such collections as the student or collector may be making. The cases before us (also transparent), each containing twenty-five examples, are, Mr. Charlesworth informs us, furnished by the Society for 18s., a price at which we feel students and lovers of natural history will be glad to find they can purchase them.

NATURE AND ART

December 1, 1866.]

BARRA, IN THE OUTER HEBRIDES.

By Thomas Gray, H.M.C.S.

THE following Jottings by the Way will, it is hoped, not be altogether without interest. Their language is unstudied, and the arrangement is perhaps rugged; but withal a few points are suggested that may lead some of us to fresh doubts whether our country has altogether attained that state of civilization in which we would so willingly and fondly believe it. They may remind those interested in missionary labours of work to be done near home; and landed proprietors, of the advantages as well as of the duty of residence on their estates. But, above all, they will inform the tourist desirous for a time of leaving civilization, its luxuries and comforts, of a sure means of gratifying his inclinations thoroughly and readily.

After an uncomfortably wet passage by sea from the Thames along the East coasts of England and Scotland, and after a few wet days on the West coast of Scotland and in Glasgow, the writer took a passage on board the steamer *Clydesdale*, belonging to Messrs. Hutcheson & Co., for the purpose of visiting officially certain of the islands on the western coast. These islands are naturally divided into two groups. The inner group consists of Skye, Rum, Mull, Jura, Islay, Coll, Tyree, and several smaller islands and rocks; and the outer group, known as the "Outer Hebrides," "The Western Islands," or "The Long Island," consists of Lewis, Harris, North Uist, Benbecula, South Uist, Watersea, Barra, and some smaller islands and rocks.

The cruise down the Clyde past the isles of Bute and Arran, and round the head, or mull, of Kintyre, is known to most visitors to the western part of Scotland; it is therefore unnecessary to introduce here extracts from memoranda respecting it. We just notice the solanders darting down from aloft, disappearing below the surface of the sea with a splash and a shower of spray, each to return above it with a fish striving and vainly wriggling in its grasp. We pass by Ailsa Craig, rearing itself about 1,500 feet above the waves, where it has rested since Fin McCoul, the Irish giant, threw it over from the north of Ireland. We take no more than a glance at the petrified packmen, and at Rob Rory's head, chiselled by nature out of the solid rock: and we hasten onwards. We cannot afford now to loiter: our business is not to admire Nature's freaks in the inanimate world, nor to describe "glowing sunsets," "roaring seas," "natural curiosities," and "show" places. Descriptions of these may be found in novels, and in guide-books. Our business and our thoughts are now with the people of the Outer Hebrides and their wretchedness.

Leaving, then, the many and varied beautiful islands, rocks, ruins, lochs, and bits—each with its legend, and each the delight of the naturalist, the artist, the geologist, and the antiquarian—to be admired at the proper time, as they deserve to be, we must make a rapid stride northwards, whither we are bound peremptorily, picking up on the road two travelling companions (one a returned Indian, and the other an officer who has been in action before the enemy upwards of twenty times), both well capable of observing and judging accurately; we run up between Kintyre, and Jura and Islay, that paradise of topers; northwards, again, through the sounds of Mull, Islat, and Raza, the latter sound separating the beautiful little island of Raza, with its woods and cairn, from Skye, with the Cuhulen hills, the most grand and Alp-like of all the grand Scotch ranges. Still northwards and westwards across the treacherous "Minch," we reach Stornoway, in the island of Lewis, the most northerly and most important of the "Outer Hebrides."

Our interest will be concentrated on Barra, the southern island of the group; but as we were obliged to proceed to Stornoway in the first instance, we implore our readers to put up with a little trouble and perhaps tediousness, by taking a short practical survey of the country between the northern and southern extremities. The general impression of the whole group will be recorded further on; but our short preliminary survey of the islands will be of use and add force to our conclusions, as it will enable our reader to realize the extent of country over which it is hoped he may

some day travel, and to realize the number of British subjects resident in a strange British colony within Great Britain. These people, although actually within Britain, are practically more remote than are the Canadians; and while at the present moment we can communicate with our kindred in North America and receive a reply within ten minutes, we cannot at all times communicate with our brethren in the Hebrides within six weeks. We entreat our reader's patience, and we claim his attention. We wish to hold out a helping hand, to assist in raising these people from a slough of ignorance, dishonesty, superstition, and filth, as shameful, as degrading, and as unwarrantable and unjustifiable as any that ever shocked a philanthropist, or demanded the attention of the thoughtful and right-minded.

Reader, do not turn away, saying, "Fine words, Mr. Tourist—fine words; but nothing in them." If you have patience, we pledge you we will prove them all; and, if you have a heart, we will enlist it in our cause before you close the book. But to commence our survey.

The island of Lewis is about forty miles long, and has in its broadest part a breadth of about twenty-five miles. The population is about 19,000; and the proprietor, Sir James Matheson, is a model landlord, and a public-spirited gentleman. During the potato famine with which these islands were so severely scourged about twenty years ago, he was the only resident proprietor amongst a population of 37,800 souls. His presence was a tower of strength. It aided the Highland Relief Committee in a proper and effectual distribution of their funds and stores. He has built a beautiful mansion at Stornoway, and has established a factory for distilling oil, &c., from peat, with which the islands abound. The inhabitants of Lewis are Protestants; and although destitution, immorality, and degradation abound there, as they do everywhere else in the Outer Hebrides, the people are better off in Lewis than in any of the other islands of the group, excepting, perhaps, North Uist. The comparative prosperity of Lewis, besides being in a great measure due to its proprietor's judgment, is no doubt mainly attributable to the presence of the chief port of the group. The port of Stornoway is a thriving fishing-station, and a busy place. It is pleasantly situated at the front of a very pretty little wood, and at the head of a fine bay.

The next island, Harris, which in the map appears to form a part of Lewis, has a length of twenty-six miles and a breadth varying from eight to twenty-four, with a population of about 5,000 souls. The religion is Protestant, and the proprietor is the Earl of Dunmore (or "Harris," as he prefers being called). At the time of the potato famine Lord Harris was in his minority, and was absent; but his excellent mother, Lady Dunmore, was present, and nobly represented the proprietor in the island. She, like Sir James Matheson, behaved well; and, by her exertions and motherly care, saved the lives of many crofters and cottars and their families. The island of Harris, although mountainous and rugged (one of the hills is 2,600 feet high), contains some good pasturage; but it is not a place where grain can be raised to much profit. Tarbet, the chief place in Harris, is situated on the head of Loch Tarbet, and is one of the stations of the steam packets.

The next island, North Uist (pronounced Whoeest), is about thirty miles long, with a breadth of from eight to fourteen miles. Lord Macdonald is proprietor. The population (Protestant) number about 4,500. In North Uist the people are generally more thriving than in the other islands. The houses are better built, and some of them contain furniture. The people here at once strike the visitor as being more cleanly and intelligent than their neighbours. Loch Maddie, the chief town, is situate on a loch of that name, and is the station of the sailing mail-packet between North Uist and Dunvegan, in Skye. A "maddie" means a dog; and at the entrance of the loch are three remarkable rocks (well worth the study of the geologist) known as the Maddies, or Dogs: hence the name of the place.

Benbecula (with its romantic name) is the next island, and is about nine miles long and nine miles broad. The population is 2,000, mostly Protestants, as far as we could learn; but some of them are Catholics. The proprietor is Colonel Gordon, of Cluny Castle, Aberdeen. The island is flat, and the soil is sandy and not productive; but potatoes and cabbages are sometimes raised in abundance. It is separated from North and South Uist by "sounds," or, more properly speaking, "fords." These fords claim a passing notice, since they regulate the business of the inhabitants and supply them with much food. Business matters and meetings are here settled according to the time of the fords. When the tide is out they are practicable, and present a very remarkable appearance to the stranger. The sand covering the bottom is a pure white silver-sand, whilst the land around is chiefly black bog and brown rocks. The contrast is most marked. It is not safe to cross the fords in a chaise or cart, without a guide; the sands, though generally firm and hard at low water, are in some places quick and very treacherous. They are sprinkled with innumerable rocks, which look like various-sized haycocks and stacks, placed in all sorts of puzzling positions. It is amongst these rocks (some of which have beacons and crosses on them to serve as land-marks) that the guide conducts the traveller. The fords abound in shell-fish, which give food to the inhabitants, who in this place will eat them; whilst in Barra, a little further south, they will not. When the water is up, the fords are impassable. No boatmen will venture into a sea so thickly studded with dangers amongst which the tides rush, and whirl, and eddy with fearful violence.

The next island, South Uist, is about twenty-six miles long, with a breadth of about seven miles, and a population of 5,000. Colonel Gordon is proprietor, and the population are nearly all Catholics.

In passing through South Uist, some parts of it appeared to us to be capable of cultivation, whilst others presented expanses of black peat and black ponds, having a most dreary and depressing effect. The parts round the slopes of mounts Heckla and Benmore, are especially rugged and dreary. Heckla is marked in our travelling map as 1,992 feet high, Benmore as 2,038 feet. The people seem to be much the same as in Lewis and Harris. But at and about Grogerry, where the steward of the proprietor lives (who gives visitors a hospitable welcome, and who has two very pretty daughters), the country was nicely cultivated, and after Barra and some other islands presented to us a cheerful appearance.

And now we come to Barra. The *parish* of Barra is perhaps the most extraordinary in the United Kingdom. The people cannot all get to the priest, and if he were to visit all his flock, scattered as they are on so many small islands, he might be able to visit each place once a year. The parish consists of Barra Island Proper, and the islands of Watersea, Sandrera, Mingala, Pabba, and Barra Head Islands, besides islets and rocks innumerable. The length of Barra Island is twelve miles, and the breadth varies from three to six miles. The length of the entire parish is twenty-four miles. The population is about 2,300, of whom 300 are Protestants, and 2,000 Catholics. Colonel Gordon is proprietor.

After this catalogue of the islands, we will endeavour to convey our impressions of the general aspect of the whole group. They are rugged, bleak, poor, and the atmosphere is misty, with the hill-sides and valleys generally sprinkled thickly with granite boulders. Where the rocks are covered, the covering consists either of sand or peat-moss. The parts covered with peat-moss have a dull, heavy, black appearance, and the shallow lakes, or ponds, and sluggish ditches, reflecting the blackness of the peat, look like ink, and add to the general depressing effect. The constant visitors to these fields are the "Hoodie" crows. They are large birds, with bodies much the colour of a dirty blue pigeon, with black head and wings, and black feathers half way down the neck. They have a very melancholy look, and when walking about the black peat remind one of undertakers' men in a cemetery. These fields, cut up for fuel, look something like black brick-fields. The peat in bricks is arranged in stacks, or strewn about and left to dry.

In the sandy parts the sand drifts in large masses, and is the crofter's greatest enemy. The drift in some places will cover the surface of the grass for many feet thick in one night. The crofters do what they can to keep the surface level and unbroken, so that the sand may not be exposed to the winds, and for this purpose it is covered where possible with "bent," or coarse grass. The soil in all cases, whether sand or peat, gives a very scanty crop, unless well manured with lime or sea weed. Potatoes seem to be the chief thing cultivated. Sheep feed on the small grass that grows freely on the hill-sides, and Scotch cattle are raised in some numbers. In most of the islands there is grouse, and in all, plenty of wild fowl. The sportsman can always find rabbits, otters, woodcock, moor-fowl, wild duck, &c., and we noticed amongst the rocks in the bays, seals in abundance.

The tenant farmers of the Hebrides are like the same classes elsewhere; but the lowest class, the "crofters" and "cottars," as they are called, differ from their own class in England to a degree that is difficult to believe even after having seen it. The deputation of the Highland Relief Committee, who visited these islands in 1849, reported as to their condition in the words given below; and we would rather, in a case like the present, use the words of the bonnie Scots themselves, than our own. Our words might be open to misconstruction, and in any case they might be attributed to prejudice; but the words of the Highland Relief Committee cannot be objected to as unfair. They are as follows :—

"We regretted to see that the crofters and small tenants were, for the most part, huddled and crowded together in miserable hamlets; that their dwellings were, with one or two exceptions, of a wretched kind, filthy in the extreme, most of the people being under the same roof, and on the same floor as the cattle; and, worse still, the manure being gathered and kept in the houses till it requires to be laid on the ground."

We confirm this from our own observation, and can add that most of the hovels abound with uncomfortable *parasites*, and are contiguous to stagnant pools, tainted with animal refuse, around, in, and about which the half-naked and half-starved children "play."

Having by this time conveyed a general, and probably a most uncomfortable, idea of the whole group, we will proceed to speak particularly of Barra parish—the place to which we were specially deputed, and in which we spent most of our time. Many things we have written about this parish are, doubtless, applicable to the whole group; but, as our attention was concentrated on Barra parish, and as we specially observed and noted the habits and manners of the people there, what further we have to say about the Outer Hebrides, we will say in connection with it.

The western shores of these islands just catch the tail of the Gulf stream. The climate is therefore not so cold as might be expected from the latitude; but the islands, especially those to the south, are wet to a degree equally astonishing and uncomfortable. The natives must be, and really are, amphibious. The swell from the Atlantic, which rolls in with enormous force and grandeur, soon breaks up any vessel that may come ashore on the western side.

The coast-line generally is bleak and savage-looking granite, with a few very fine sandy bays. There is not a single tree or shrub in the whole of Barra Island. The group of islands forms a sort of outlying breakwater. On it are continually washed ashore curious Indian carvings and articles from the coasts of America, and on it are stranded derelict

vessels, abandoned during their voyage to or from our North American provinces, as well as others with crews and passengers on board, beaten in by stress of weather. In the six months ending June, 1866, very nearly £300,000 worth of property has been washed ashore, or has appeared in distress off these islands. This shows the necessity for an efficient police, and a vigorous administration; but the islanders look upon these wrecks as a special dispensation of a wise Providence.

Most of the men were away on the East coast, fishing; but we heard, on the authority of the doctor of one of the islands, that they were not half a match for the women. The women wear their hair loose about their heads, and, except the crones, very few were observed to have any decided head gear. Their legs are bare, excepting on occasions. We saw one or two women with *footless* stockings, and no shoes. Shoes are almost unknown amongst the women and children, and are not believed in—they keep the feet so wet—and footless stockings seemed to be great luxuries. The feet would be no use in the stockings, because they would be worn out in one day. For clothing the women wore all sorts of odd adaptations. It was a matter of wonder to us at first where they got their clothes from. They (the women) did not appear to us to wear, as a rule, clothes of home manufacture and of native wool; but to have a selection from a most marvellous and miscellaneous collection of old clothes. In fact, amongst the women of the hamlets in Barra, there may be seen curtailed specimens—very faded, ragged, and worn out, it is true, but still specimens—of costume from Queen Anne's time, downwards. The only conclusion to be arrived at is that they get their clothes from wrecks, and thus obtain the fashions of almost all nations. The one drawback is that through sleeping on the ground with the animals at night, and getting wet all day, the garments lose their distinctive colour and pattern, and all alike seem to be dirty, draggled, and deplorable. A robust woman, broad in the shoulders, thick-necked, large-handed, bare-legged, her hair half-way down her back, and a short, ragged garment, with little or no covering for her head, is of the ordinary type in Barra. The young ones ride very gracefully on bare-backed ponies; and sometimes, though very rarely, the elder ones indulge in a short pipe. But, with all their coarseness, there is a bearing, a diffidence, and a shyness about them in the presence of strangers, that commands respect, and appeals to the heart for sympathy. It is charming to dwell on the rights and social influence of woman; to look on woman as she really is, the regenerator and civilizer of the human race. It is satisfactory to think that most of our great men owe their greatness to the influence and teaching of their mothers; to speculate what each of us would have been and must inevitably have been if at some time or other in our chequered life, we had been deprived of the genuine and heartfelt solicitude of a mother, a sister, a wife, or a daughter. It is cruel to think that in some parts of our civilized country, and in that part of it in which our Queen delights to dwell, woman is as degraded and her position is as hopeless as amongst savages. There the women and the girls dig manure and peat, which they carry in heavy loads in baskets like caller herrin' baskets, and (on the authority of the Highland Committee), "they do the work elsewhere done by the lower animals."

It is sometimes pleasing to live in agreeable delusions. The delusion as to the social position of woman was one of these; Jack the Giant-killer was another. The delusion that the amiable E. L. Blanchard, the delight of our childhood, wrote pantomimes whilst surrounded by fairies and flowers, was another. The delusion that Grace Darling was lovely and fairy-like, was another. These delusions pass away one after another, and are replaced by stern facts. The angelic Grace Darling gives place to the Barra woman. Grace Darling must have been a heroine of the Barra type; none other of the sex could have gone off in such a boat to such a wreck, in such a storm as she did. We saw several Grace Darlings in the flesh, here and elsewhere, some pulling boatloads of "winkles" to sea to meet the steamer going south. In the islands, other than Barra, they put off from dreamy wooded little nooks and bays; and if they had not always been accompanied by a very old man with a bright butcher's-blue gingham, they would, in the distance, have been suggestive of Nereids. As a companion in a boat amongst the fearful and treacherous rocks of the west coast, on a stormy night, the actual black-haired, black-eyed Darling is a mighty fact. Strong, uncompromising, vigorous, and assuring, she pulls a heavy oar, with a straight fore and aft movement of the body. The determination of her mouth leads us to dread her; but her clear eye and retiring manner reassure us, and her limbs lead us to wonder by what process they were developed.

The men whom we saw dressed better than the women, and like ordinary fishermen and hovellers. But some of the elders, the heads of families, seemed to exist only on dirt and pigtail. In a covering of dirt they stood at the doorways of their filthy huts looming at the puddles of stagnant water, with their heads in the smoke from the peat-fire—the door often serves for door, chimney, and window—a fit representation of the benighted and bewildered state of the whole.

The food of the people in Barra consists of oat-cake, potatoes, salt fish, milk, boldie, and brachsie; and the drink is, as elsewhere in Scotland, whisky. The streams give good healthy water for ducks and geese, and there are plenty of small insects for fowls; and the lakes and streams, as well as the bays and rocks, abound with fish. Not with fish to be lightly rejected, but with fish that an epicure would delight in: and yet these people nearly starve in the winter. Their food is potatoes and salt fish one day, varied by salt fish, meal, and potatoes the next day, with now and then some brachsie. Without meal, the proper allowance per head per diem is 8 lbs. of potatoes. They drink

milk, which they can generally get, and whisky always.

One sensible man told us that potatoes were the ruin of Barra: and he is right. Without this information, we should have thought it had been whisky. "If," said he, "there were no potatoes, the men would take to fishing regularly. As it is, they don't give their minds wholly to either. When the potatoes ought to be planted, the men go away on some sort of fishing in a half-hearted manner; and when the herring fishery is on, and they ought to be hard at work at that, they run away home in a body if they hear that the potatoes are 'seeding.'" It is the old story of the donkey between two bundles of hay. But the way in which potatoes are the ruin of the island is, that a cottar can get a hut (or stye) to live in with his family and animals, and a small patch of ground for potatoes, for £1 a year; and in such small holdings hundreds are packed where there is room only for tens. If the potato crop could be depended on, these wretched people might exist; but, as it cannot, the suffering is severe. Eggs are plentiful in the spring and summer; but they are mostly shipped South. Chickens and ducks are numerous; but beware of a Barra chicken or a Barra duck. We remember our attack on one, and our ignominious defeat. They are too valuable to kill, as long as they can be induced to lay. They are looked on as egg-producing machines; and it is not until they are worn out and run dry, and the combined efforts of nature and art fail to concoct another egg, that they are sacrificed.

"Boldie" (*query* whether this is quite the right name*) is a term applied to sheep who go mad from various causes, *e. g.* maggots on the brain. Boldies are caught and are put into an asylum, where they are made to take food. They are incurable; but they rally and get somewhat fat sometimes, between the attack and a relapse. In this state they are shipped off, or are killed for ships wanting meat and ready to pay for it. At all events, they are sold if they can be, and if not they are killed and eaten; but it vexes sore the heart of a true-born Hebridean cottar to kill his own sheep. To eat anything of his own that will sell, is, according to his political economy, a false step.

The law of *meum et tuum* has not yet been clearly expounded in Barra: it is not therefore surprising that it is not acted on. To steal, and kill, and eat the sheep of other persons, is a differeat matter altogether from killing and eating their own. That this is not uncommon, is shown by the proprietor, Colonel Gordon, who complained to the Treasury that certain of the islanders had lost "from sheep-stealing alone, from 2,000 to 3,000 sheep." The Highland Relief Fund investigated this allegation, and reported that while there had been sheep-stealing to some extent, Col. Gordon's statement was exaggerated. They admitted, however, that out of a stock of 6,190 sheep, 1,132 had disappeared; and after allowing for casualties, this left a great number as misappropriated. As a chicken is looked upon as an egg-producing machine, so a sheep is looked upon as a wool and mutton producing machine. The quantity of wool exported from these islands is enormous. A sheep does not in the ordinary course of nature live more than three years upon them. After that term the wet climate tells on him, and he gets the rot. His owner, therefore, makes wool of him for three years, and sells him for mutton the next.

Although a Barra man prefers to sell his sheep rather than to eat it, he takes care that if any die from natural causes they are not often wasted.

"Brachsie" is a term applied to sheep that die on the hills from natural causes, such as inflammation of the bowels, &c. Of course they do not have the professional attendance of a surgeon or a butcher, and die with the humours and blood in them. They are picked up when they are found, it may be a day after their decease, or it may be a month, but whenever it is they are carefully taken home by the finder. The skin is used for bladders for fishing floats, the offal goes to the ducks, and the flesh is eaten by the men and women. We wanted mutton and might have got "brachsie," but as one of our party had resided on the island in the depth of winter and knew the peculiarities of the dainty, we declined it on his advice. The colour, what with the disease and blood, is that of our boots; and the smell, faint and indescribably disgusting.

The fish salted and eaten is either cod, ling, skate, or hake. They do not eat much fresh fish. On the rocks are a few oysters; and there are cockles, scallops, and mussels in abundance, and in the sands razor fish. The cockles alone saved many families in the potato famine. The other shell-fish they never or rarely eat. In the streams and lakes are trout, plentiful but small; and in the sea are lobsters, crabs, eels, and almost all sorts of fish. The natives of Barra do not seem to care about trout, as far as we could learn; and they would as soon think of eating scallops and other shell-fish (except cockles on emergency) as we should of eating "brachsie." Eels are forbidden to be touched as food. The reason assigned is, that they are a part of one's own economy, springing from human hair; and when a Barra man gives this reason it is not, as would at first sight appear to be the case, an evasion on his part: it is really a belief. This superstition about eels and snakes coming from hair is not confined to the Hebrides, although there the story is more generally current than elsewhere. A somewhat similar superstition exists in the Orkneys and Skye as to the hair of cows and horses. In Essex it obtains as regards the hair from the tail of a horse. In "Antony and Cleopatra," act i., scene ii., the following words occur:—

* * * "Much is breeding,
Which, like the courser's hair, hath yet but life,
And not a serpent's poison." * * *

In "Ovid" we find the following allusion to a

* It is not always easy to catch the correct term in this outlandish place. Boldie, or Bawldie, or something like it, is perhaps near enough.

superstition that snakes spring from the spinal marrow of a man. Garth's translation has it thus :—

> "There are who think the marrow of a man,
> Which in the spine, while he was living, ran;
> When dead, the pith corrupted will become
> A snake, and hiss within the hollow tomb."

But we are digressing, and, now that we have secured the reader's attention, we must return to Barra in the Outer Hebrides.

The people at Barra (Celts) are always spoken of as "*a peculiar people.*" They are Papists of the most faithful order. They take vessels of holy water with them to sea in their boats and obtain the priest's benediction before starting on a long voyage. They have a perfect and simple faith in the power of their priest. They believe in his power, because "he can turn them into a pillar of salt." Their belief in his goodness, however, we did not discover. They are the Ishmaelites of Scotland. Every man's hand is, so to speak, against his neighbour. As a practical fact we found that almost every one had something to tell confidentially about somebody else that would have insured hanging or transportation for life if true and proved. The moment an absent man's name was mentioned every one condemned him. They quarrel amongst themselves and live in a state of perpetual quiet hostility, each watching for the faults of the other; but if a stranger come to the island to buy, or if a ship come in in distress, then they band together against the intruder. They act on the direction literally—"If a stranger come within your gates, take him in;" and they do take him in with a vengeance.

We were charged as much for the use of a dung-cart without springs, and the horse without harness, to take us over parts of these islands, as we should have paid for the use of a two-horse brougham and a man in London for the same distance. At the inns the charges are higher than at the "Waverleys," and at the cleanest and best we had to sleep on a table, in a place with a brick floor and ducks for visitors. We must do this inn justice and say that it was clean, and that we were put about in this way because the Procurator-fiscal had engaged the *only* bedroom. Let its name be recorded as "Sinclair's Inn, Bhirva, Barra." At the inn at Pulchar, in South Uist, there are four rooms on a floor: one was the tap-room, another was the stable and cow-house, a third a pigstye, and the fourth a sort of dung-heap. The state room is on the first floor, and is furnished with one bedstead and bed and two chairs. The ceiling was not water-tight, but the bedstead was intended to be. It has a good strong wooden roof, and can be moved about to the dry part of the room when it rains, and with a tarpaulin over it would be comfortable—that is to say, comparatively comfortable—all things going by comparison. It was more so than the dung or peat cart we travelled and rested in, but it was not so clean. In truth, the inns have not been run down enough: they are execrable holes. The proprietor of the island settles how many inns there shall be, and who shall be the innkeepers, and there is an end of it. Comfort or convenience is not required. People might go again if they were made comfortable, and to encourage strangers amongst them would seem to be, in their eyes, a mortal sin against independence of spirit.

We must not omit mention of the sea "ware" or sea "rack." It is the *Fucus vesiculosus.** It fixes itself to the rock by a sort of fibrous sucker, grows from seven to twelve or fourteen feet long, and is about as thick as the wrist of a middle-sized man. It is used for three purposes, viz., fodder for cows, manure, and soda ashes. Its appearance when cut across with a knife is something like the section of a soft turnip. Great value is attached to this sea ware, as may be understood from the fact that at the time a well-known wreck lay on one of the islands, the farmers' people had to walk round her, instead of going straight, to get to the place whence they carted the sea weed before she came ashore. In fact, they went out of their way some yards, and for this, under the head of "circuitous route which had to be taken for sea weed," they claimed upwards of £120 from the ship-owner. It seemed a favourable opportunity for making somebody pay for something, and was too good to be lost.

Surface damage is another favourite claim. When a wreck comes ashore it may do a little damage, and people passing and repassing may do a little more. We advisedly say *may* do. If a wreck were to happen on some parts of our coasts, for instance on the margin of wheat fields, under crop, damage *would* be done; but when a wreck happens on granite rocks, and is confined to those rocks between high and low water mark, no damage can be done to the coast, and when the surface further inland consists of a grass-grown peat thickly sprinkled with boulders of granite, it is not easy to see how any damage could be done to that. The damage in any case can only be that the "bent" may be worked off the surface when it is sandy, or that where wreck is stacked the grass or bent will die under it; but it will come up again next year. In one case this happened on one of the Hebrides. For about the space of three acres, patches of grass had been covered with wreck and had faded, and patches of bent, in a space included in a hundred yards, had been worn off the sand. The damage done to the bent could be repaired by half a dozen labourers in two days, and we have shown that a cottar can get a plot of ground for a pound a year: but about £30 was charged for surface damage. In the case of another and sadder wreck in a sandy bay in the Hebrides, an enormous sum was charged for surface damages. At the latter wreck also, a bill was sent in to the owners that could only be equalled in fiction. Amongst other things equally monstrous, was a charge of nearly £400 for "cattle scared, so

* Commonly collected for the manufacture of kelp. Kelp is not now manufactured to any great extent, but a few years since it was a source of great wealth in the western islands and the western shores of Scotland.—*Engl. Cyclop.* (*Nat. Hist.*, vol. i. p. 113).

that they would not feed;" another for "drying ropes, and frightening cows," nearly £400; and another for "cows that slipped their calves, and calves lost," upwards of £400. So that it would appear that all the cattle on the island went to see the wreck, and that all these cows were *enceinte*, and in such a precarious state at one and the same time, that the wreck coming ashore brought on a premature delivery, and caused their offspring to die. This would not be believed in a novel, and yet it is a stern fact. Perhaps the worst feature of all was the way in which the survivors are reported to have been treated; they were, as was stated in the press truthfully, in many instances pitilessly plundered by the cottars of what little they had contrived to save and bring ashore, and it has been alleged, it is to be feared with truth, that in many cases, fingers of the dead were cut off, or pulled off, or "came off," during the time that these wolves were possessing themselves of the rings and squabbling over their prey. A heavy charge was made for burying the dead. The funeral service is reported to have been a farce, and the whole proceeding brutal and degrading to a degree. The bodies were thrown into two holes, "packed like herrings in a barrel," and there is no mark, not even a rail or bit of wood, to show where these bodies are buried, where not far short of 360 of the victims of one of the most heartrending wrecks of our time lie interred.

But again to return to Barra. The Protestant Church at Bhirva is out of repair. The roof is not watertight, and the floor of the church is not paved or boarded; there is one pew only, and the church itself is tolerably large, but more like a barn inside and outside than anything else. We have been told that it is not an uncommon occurrence for umbrellas to be used inside the church on a wet day. This may be, and we hope it is, untrue, but at any rate, we know from the actual knowledge of one of our party that in the school-house the children could not keep their books on the desk last winter because of the rain coming through the roof.

The minister at Bhirva is a scholar and a gentleman, with a fairly cultivated glebe, some good cattle, two fine and handsome daughters, and an inestimable wife. She, dear, kind soul, took us in when, in attempting to jump over a river (which, were it not for her kindness, we would call a ditch), we had fallen into it. Hers was the nearest house, and thus we made her acquaintance. She had our clothes toasted and our boots baked, and rigged us out in the clergyman's suit, just big enough to hold two of us, and then took us into her parlour, where, under the influence of new milk and whisky, as preventives of cold, we enjoyed the pleasant and lively conversation of herself, the minister, and their daughters. This glimpse of civilization—this oasis in the desert of Barra—will ever be remembered, but at the time it only made the dreariness and desolation outside appear still more dreary and more desolate.

How is the law administered in Barra? Reader, there is little or no law. The tenant farmers in these islands are mostly of undoubted respectability and immovable integrity; but some of them, as we have seen, make harvests out of wrecks by systematic and groundless claims; and the cottars act in a straightforward but less systematic plan of open plunder. The Government ships have visited Barra, so we were informed, three times in ten years. The police force in the island is not active and is not intelligent, nor could it establish a character for sobriety. It consists of a solitary constable. This representative of authority troubles himself not about plunder and lawlessness; his mind is accustomed to the normal state of things on his beat, and he is supremely happy and contented with an occasional glass of whisky.

During the last winter, a ship laden with paraffin came ashore, and soon broke up. Seventy-five casks were recovered, and given into the custody of the Resident Deputy Receiver of Wreck, the Government officer appointed to protect the interest of the owners. Now, Barra is a place whence thieves cannot escape, and had there been any desire to suppress plunder or to detect the thieves, it could easily have been done. But not so; twenty-five casks were removed from the custody of the Resident Receiver, a tenant farmer, by the natives, who thought it was whisky or gin, or something to drink. And although it was offered for sale freely throughout the islands, and although every hut was burning it—some in teapots with the wick through the spout—no steps were taken to detect the thieves, and the Hebridean officers, who ought to have protected the property, represented that there had been almost no plunder at all.

The *Harmony*, a large timber-laden ship, came ashore on the rocks last winter, bottom up. She was on an isolated rock, and her bottom and keel were prominent objects against the sky. Gulls, herons, and puffins sitting on them, could be seen distinctly from the neighbouring places; and yet thieves worked on her where any one could see them, day after day, and week after week, with heavy hammers and crowbars, until nearly the whole of the valuable copper fittings were removed. Some of them of great size and weight were carried about and disposed of in the most charmingly open and candid manner. The policeman's beat is large, and he was probably wanted at another part of it; we will not put his inaction down to apathy, as he does bestir himself sometimes; for he has been known to get a search-warrant two months after property has been stolen, and to make a search of premises after giving twenty-four hours' notice in the cross roads that he was about to begin.

And now one other of last winter's cases, and we have done. We like to take recent cases, otherwise our readers might be deluded into the belief that all we have written about Barra, its crime, barbarism and misery, are things of the past. We would they were things of the past, but, alas! it is not so. Last winter, the *Bermuda*, a fine ship, was wrecked there. It was a fearful night, and bitterly cold, with a driving sleet, and with the snow thick

on the ground. After passing days and nights of mental anxiety, and after narrow escapes, that by their frequency had almost removed a sense of danger from the captain's mind, the ship was wrecked on a lee shore. By almost a miracle, the captain, his wife and little daughter, and the crew were saved. But the scene of lawlessness at the wreck was something indescribable. Everybody began to "rifle, rob, and plunder;" and such was the effect on the crew of the vessel, that, notwithstanding their recent escapes from peril, *they joined in and plundered too.*

But the worst remains to be told. The captain's wife and child, two helpless creatures, half dead with fright and cold, bewildered by the horrible dangers they had passed, and scared by the hellish sight and noises around them, stood benumbed in the snow and piercing wind. Their boots were taken from their feet and their wraps and coverings from their bodies, and in that state they might have perished.

The captain resisted, and appealed in vain for help. He was powerless. The people believed that Providence had sent them another harvest. Should they not glean it while they could, and while they were permitted by the Island authorities?

Reader, your patience is exhausted. We have redeemed the pledge we made you. Have we enlisted your sympathy?

THE GREAT TREE-ALOE OF DAMARA LAND, S. W. AFRICA.

By T. Baines, F.R.G.S.

IT was during the month of May, 1861, and about a fortnight after my first sight of the *Welwitschia mirabilis*,* that I was privileged to behold another marvel of the vegetable kingdom, which I believe is not yet figured in any work available to the public of this country, nor contained in those which, by the kindness of Dr. J. Hooker and Professor Oliver, I have been permitted to examine in the herbarium of the Royal Botanic Gardens at Kew.

Leaving Hykámkop on the 10th, and halting to send the cattle down the long ravine at Oosip, again to seek a little water in the Swakop† river, we spanned out after a long night journey, near the Roode-berg, ‡ where, on the 11th, the rising sun showed that the soil began to be scantily veiled with small narrow-leafed white grass, which, though nearly invisible when we looked straight down upon it, showed, like the mirage, in greater strength when the eye glanced along the distant plain; and with the heavy dew sparkling upon it, reminded me in some degree of hoar-frost upon the fields in England. As the mist cleared off, we saw the bold outline of the Roode-berg, its peaks barren as they had appeared the day before, but its sides slightly tinted by scanty grass, dwarf aloes and bushes, scattered among the enormous boulders. We expected shortly to reach Tincas, the reputed headquarters of the lions, where at one time the spoor of as many as eighteen together had been seen, and at another a traveller had encountered a number, "sitting across his path," and by no means too eager to get out of his way; and where, in sober reality, the drivers considered it unsafe to walk beside the waggon after dark, lest a lion following, in hope of picking up a disabled ox, should spring upon them.

With so hopeful a prospect, I thought it as well to spend an hour or two in getting my hand in to the manufacture of cartridges for my rifle. Shortly after noon, the friends whom we had left behind upon the road from Walvisch Bay, came up, and Mr. Cator invited me to his waggon, from which Mr. Smutz soon after pointed out two remarkable pinnacles in the distant range, which have been called "the Ears" of almost every resident of any importance in the country; but as this would suggest rather a Midas-like comparison, I should prefer to name them, as Cator did, "Westminster Abbey."

But beautiful upon the mountains, as were the warm grey tints and soft pearly shadows of the distance, a treasure more estimable far, lay unsuspected by me, in the bare granite mound beside us. As the loose cattle turned from the path and streamed up its sides, I thought they were but taking a nearer cut; but when the dogs returned with dripping jaws, and the men with well-filled barrels, I knew that this must be the water I had heard of. In the top of that low mound was a large, and nearly circular hollow, retaining the water of the last rains. I determined at once to remain and devote the rest of the daylight to the completion of my sketch, in which this jewel of the desert became the prominent object, and the distant ranges the accessories; my friends considerately leaving a Damara to carry my gun and sketch-book. At sunset Onesimus arrived, reporting that his cattle were unable to draw the waggon further. A sheep was slaughtered on the spot, and, as all hands had been on short commons for the last two days, supper was soon extemporized. Next morning I walked ahead, the path winding between blocks of weathered granite, some of which seemed as if an infant's touch could launch them down to bar the narrow pass. As the country opened, the vegetation improved, and frequent bushes of *Euphorbia* were seen, with green rod-like leaves of

* For description and drawing of this plant, see Nature and Art, No. 3.

† Or Schwagoup; from a Hottentot word signifying fatness. *Not* Swartkop.

‡ Pronounced Rôôee-beerg (the Red Mountain).

half an inch in thickness and five or six feet in height; while in the dry sandy bed of the little Tincas, the native ebony trees, with their fresh green drooping foliage, looked like weeping willows in miniature. At the Tincas outspan was a little pool, near which stood a mass of white rock, connected with the low rugged cliffs by a rough wall, serving as a "scherm," or shelter for the night hunters. The spoor of a lioness and two cubs had been seen; but only a couple of ducks had been shot. I waited till long after dark, and was making up my mind to pass the night there, when I heard the echoing "klap" of the long waggon-whip, and after a smart walk overtook Onesimus, who had already passed the river; and consequently I had to return half a dozen miles next morning for some valuables deposited in a hollow of the rocks. The few spring-boks we saw were difficult of approach, and the Damara who followed me, was not a little astonished when he saw the bullet from my Wilson's breech-loader strike up the red dust close by an ostrich at a range of more than 1,100 yards.

With the ready hospitality characteristic of a thinly-peopled country, Smutz, who heard that I was a-foot, rode back leading a horse for me. The surface of the plain seemed limestone, and in a hollow of it we saw about six inches of the folds of a serpent fully as thick as my wrist. Any attempt to take him alive would have been imprudent in the extreme, and had the rock been granite, it would have been hardly less so to have risked the rebound of the bullet; but, as it was, I fired into the orifice, in hope of destroying, even if I could not capture, the venomous reptile. We rode S.E. and E. toward Onanies, and outspanned near a couple of large granite hills, destitute of vegetation, smooth, bare, round, and solid enough for the construction of rock-temples of any magnitude, had there been natives with surplus energy for so vast a misapplication of labour. At night, I believe a little farce was got up for the benefit of a couple of tradesmen going up from Cape Town; one of the Damaras personating a lion leaping and roaring in the bushes, and the rest of the party firing as wide of him as possible.

The country continued to improve. Park-like glades and clumps of mimosas were seen upon the plain; and, as we passed under the steep cliffs of the Witte-water range, the "Kameel doorn" (*Acacia giraffie*) became a feature in the landscape, while throughout the valley and over the mountain-sides were scattered aloes of many varieties; some of them (like those of the Cape Colony), *spicata*, *perfoliata*, *ferox*, and others from which the medicinal gum is extracted, were reared on stems six or eight feet high, draped roughly with the withered foliage of former years, with star-like crowns of fresh green leaves, and gorgeous spikes of crimson, scarlet, or orange flowers. Others, more lowly but as beautiful, nestled on the ground, and carried their pendent clusters of red or yellow blossoms on many branching stems. In a crevice of the rocks, the water filtered into a small deep pool, out of which men baled it to supply the cattle, and captured the small tortoises left uncovered as they emptied it. Here, for the first time, I saw the peculiarly elongated, and unmistakeable foot-print of the giraffe; a fine male of which was subsequently shot by Mr. Wilson, who, at no small cost and labour, preserved the skin, and forwarded it to the museum in Cape Town. Naturally enough, the hunters—averse to the pronunciation of long names—utterly ignore that of camelopard; but, instead of using the convenient and appropriate one of giraffe, follow the example of the Dutch, and speak of having seen or shot so many "camels." In like manner, the fishermen on the coast will unintentionally mislead a stranger, by telling him they have caught an alligator, when they mean an alligator-shark.

We halted at the house of Mr. Jones, at Omquaronto, or Kurikop, which last Onesimus translated "Jager's," or "Hunter's place." It was pleasantly situated on the bank of the Swakop, the broad, flat sandy bed of which winds between low banks fringed with willow-like trees, while, between it and the cliffs on either side, are groves of kameel doorn, ana-trees, and mimosas. Small patches of corn or garden land were cleared in the very bed of the river, in trust that the subterranean moisture would forward the crop so far, that it might be reaped before the periodic flood should sweep it off. Extensive cattle kraals, some enclosed by the usual fence of thorn trees cut and heaped around them, and others by substantial palisades, were near the house, and nothing but *visible* water seemed wanting to make it a perfect little paradise. Still, though the sandy river-bed was not damp even to the feet, there were few places where, by digging, or by merely scratching with the fingers, the precious fluid, so effectually screened from evaporation and pollution, might not readily be obtained.

And here I witnessed a little bit of rough-and-ready justice, which goes to show that, whatever may be the faults of our countrymen or their colonial descendants, a spirit of fair play will generally actuate the majority. A quarrel had occurred during the night, and a young Englishman in the heat of passion had inflicted a rather severe scalp-wound upon a Hottentot or half-caste. A council was called: he expressed his regret for the injury, but pleaded provocation and a quick temper, excited, moreover, by an unwonted libation; and finally consented to pay eight pounds sterling, as compensation for damage, which I verily believe hardly disabled the complainant for a day.

At Otjimbengue, formerly a station of the copper-mining company, and now the head-quarters of the Rhenish mission, I found Mr. C. J. Andersson, whose property it then was, preparing for an overland journey with cattle for the Cape market, and was hospitably received by Mr. Henry Hutchinson, who walked out with me to the nearest hills. These were mostly of disintegrated granite, the large fissures in which were sometimes filled with light pink quartz, from six to ten inches thick, smooth, straight, and perpendicular as a well-built wall; while on others seemed to be an incrustation of limestone, sharp and unpleasant to the feet as well

could be imagined. On the plain he called my attention to a small creeping plant which, somewhat later, bears a beautifully-marked pink or crimson flower, followed by that peculiarly thorny seed known as the Grappler, which, if its complicated arrangement of hooks, projecting at every conceivable angle, happens to catch the lips of a grazing animal, causes the poor creature to stand in helpless and painful entanglement, moaning piteously for assistance. The seed is frequently brought as a curiosity to the colony, and a resident there once purposed to plant a quantity around his orchard as a terror to barefoot urchin depredators. I am happy to add, however, that his project for its acclimatization was never carried into effect. Among the mimosas we caught several brilliant butterflies and beetles, one of them of a rich emerald-green, with white longitudinal stripes on the wing-cases. Mr. E. Layard, of the Cape Museum, supposed it to be new, and proposed to call it *Hutchinsonia*. The Elephant beetle, so named from its peculiar form, especially about the head and trunk, and of a dull black colour with red stripes, was also common; but the Rhinoceros beetle I did not see till afterwards.

On Wednesday, 22nd, we started for "the Bay," but, being detained by the straying of the loose cattle and sheep, were glad to obtain a supply of meat from Mr. Wilson's waggon, which joined us at Chobies. Onesimus, however, shook his head ruefully over the groceries; remarking, "De zuiker raakt gedaan en de pad niet" (our sweets are getting done faster than our journey). The improvement caused by the late rains was wonderful. Tufts of tall feathery grass hid the nakedness of the soil, and the bush was adorned with flowers of every hue. One of these, of a bright yellow, was succeeded by seed-pods, varying through every tint of orange to deep red, and producing in combination the richest possible effect. Large stemless Euphorbias, with many-angled spirally-twisted leaves, and exuding, when cut, an acrid, glutinous, and milky-looking juice, grew among the rocks. They were called by the Damaras "oodwoa," and by the Hottentots "ghooro," or "ghooloo," and known in Dutch by the common appellation of "gyft" (or poison) "bosch."

We saw a few gemsboks (*Oryx Capensis*), with their long straight horns, and black harness-like markings on their cream-coloured bodies; but to follow these swift-footed creatures on foot was out of the question, especially near the waggon-road, where it was impossible to "bekruyp" (or stalk) them. A harsh noise, between the croaking of a hoarse crow and the impatient yelping of an ill-conditioned cur, suddenly broke the silence. This I found proceeded from a kind of toucan, similar to that known in the Colony and Kafirland as "Vlou Haarting" (or faint-hearted), from its short and ill-sustained flight; and, as I showed myself above the ridge, a number of "Klip Dassen," or rock rabbits (*Hyrax Capensis*),—the coney of the sacred writings—scuttled away into the stony rocks which are their refuge so quickly that, though the mark of the bullet on the cliff showed that I must have hit the exact spot, I do not believe I touched the nimble animal I aimed at.

A few deserted Damara huts did not exalt my ideas of native architecture. A rough framework of sticks covered with reeds, just close enough to allow "kraal mist" to be plastered on them, and a door-hole big enough to let a man crawl through like a snake, seemed habitation enough for them. It must be remembered, however, that these were but cattle-watchers in the veldt, and not settled villagers. The only fruit of my morning rambles was a sketch of a pair of beautiful lizards sunning themselves on the hot and naked blocks of granite, and far too shy and active to be caught, although they would allow me to stand quite close enough for observation, confident that at my first advance they could at once vanish into the fissure just beneath them. One had a yellow head and streak down the back, with red spots upon the shoulder; the other, a red head, yellow dorsal stripe, and half the tail from the base yellow, and the rest red: the body of each was dark.

On Saturday, May the 25th, we turned into Andersson's new road, which, though perhaps more rugged than the old, avoids the great détour to the south of the Roode-berg. In passing through a narrow poort, I saw, upon the hills, a small tree, bearing a marvellous resemblance to a stunted baobab. In fact, in the stem and branches, I could see but little difference; but the leaves, instead of spreading like those of the chestnut, from one stalk, were small, nearly round, and arranged in pairs opposite each other. It was, probably, one of the sterculias which abound here. In the distance I observed several trees, which reminded me of Humboldt's print,—familiar, I should think, to every one,—"the Dragon-tree of Orotava." I found the waggons outspanned in the poort, under a pretty clump of kameel-doorns, beside a nameless and waterless sandy river; and the rough veldt being now covered with seeds like miniatures of the spiked balls on the clubs of Gog and Magog, I turned to repair my dilapidated boots, to replace the canvas slippers I had been obliged to wear. I saw a troop of ostriches, but, being armed only with light shot-gun, I dropped out of sight as quick as possible, and ran back for my rifle. The noise of the coming waggons, however, had alarmed them, and as the singular granite peaks, called by the white people Wollaston's or Andersson's "Ears," and by the Namaquas "Anison," or the "horned owl," were now before me, with two or three of the supposed dragon-trees standing boldly on an intervening ridge, I stayed and made a careful sketch, allowing the waggons (light, and with young and fresh oxen be it remembered) to pass me while I did so.

To observe its character more closely, I turned aside toward the largest tree, and, to my astonishment, saw that it was in reality a gigantic aloe. Kneeling down so as to bring my arms low enough to embrace the solid trunk, I found the circumference to be nearly twelve feet. Above this it

divided into five stems, each of which, about four feet higher, was subdivided into four or five more; and from these arose branches nearly as thick as my arm, and of uniform size, even to the very top, where each was crowned by the well-known star of aloe-leaves, short, thick, tapering to a finely-hardened point, and curving gracefully upward, and each surmounted by three or more magnificent spikes of yellow flowers, showing, with more than golden lustre, above the fresh green of the succulent leaves. The stems were smooth, round, and externally of a light cream-colour. Upon the smaller branches, immediately below the leaves, thin annular flakes, easily detachable, marked, I suppose, the position of those that had been most lately shed; and near the base of the main trunk the bark seemed to burst and curl off as if very thin veneers of fine satin-wood had warped off the foundation they were laid upon.

The effect of this magnificent crown of leaves and flowers more than fifteen feet from the ground, and twenty in diameter, growing from sterile ridges of rough red rock, strewed with many-coloured pebbles and quartz crystals flashing back, like diamonds, the intense sunlight, was lovely in the extreme; so, choosing a position that commanded not only the best view of the tree, but also of a smaller one (with an upright stem, perhaps eight feet in height, as many inches thick, and having four already bifurcated branches), and of a small sterculia in the foreground, I made the sketch which, without more artistic license than the interpolation of the solitary ostrich, is now placed in chromo-lithography before the reader.

It was with regret that I broke off a couple of branches about four inches thick, in order to possess myself of a specimen; for, indeed, I am never quite able to get over the idea that the wondrous products of nature ought to be admired rather than destroyed, and I am rather afraid that this feeling, more proper to an artist than to a sportsman, greatly contributed to the safety of the only two quaggas I saw during the day. My botanical specimen, with gun, sketching-folio, and appurtenances, proved too heavy a burden; so, after carrying it for some time, I sat down to sketch it, and, preserving only the flower-spikes, left it by the path. The stony character of the country in advance seemed now to force upon the Euphorbias the necessity of enlarging their roots above ground till they looked like blocks of granite, as big as tables, with the thin green rod-like leaves growing abruptly out of them.

I found Onesimus already preparing supper, and, on my showing him my sketches, he remarked,—"Dit ist neit voor nicht dat onzen Heer zoo agter blyven" (he does *some* work when he stays behind). He recognized the tree, and, as I was anxious to secure another specimen, sent a Damara to seek for one in the rugged kloof near Wilson's Fountain. The Damaras called it "Otjitumbo;" but that, I believe, is rather the general name for any stump-like tree, and is applied to many other aloes, as well as to the *Welwitschia mirabilis*, which is distinguished by the addition of "Otjihooro," making it "the stump with a head;" eventually, however, they gave it the name of "Omontinde," though whether this applied exclusively to the gigantic aloe I could not learn.

Our path lay down a deep ravine, from whose dry sandy bed rose stifling dust-clouds, which though the moon shone brightly, rendered even the nearest objects all but invisible. We passed the junction of the Onanies river with the Swakop; and, though the bed of the "Father of Waters" showed only as a strip of desert sand, the roots of the "kameel doorns" seemed to find moisture enough beneath to enable them to keep up a refreshing verdure in their spreading foliage and gracefully waving catkins, among which I found an opportunity of netting a few butterflies. "The reeds," as, from the coarse vegetation on which the oxen fed, our halting-place was called, were varied by groves of thorns and tamarisks; and from the branches we brushed off, in passing, caterpillars against which Onesimus earnestly warned me, as the mere pricking of the skin with two or three of their bristly tufts was enough "to make a man scratch himself to death." Nevertheless, I have handled more formidable-looking creatures of the kind in Kafirland, and the only result has been a slight but long-continued irritation of the finger-ends, and a consequent vow against future contact with hairy caterpillars. Some of the trees were thickly covered with a kind of red flowering mistletoe, from the berry of which birdlime is sometimes made to strew in the path of guinea-fowl;—and the spoor of a solitary rhinoceros proved that the species was not yet "shot out" from Damara-land, though the number of bleaching skulls would almost lead a traveller to think so.

After a passing call to renew my acquaintance with the *Welwitschia*, or rather "the plant of Hykámkop,"—for it had as yet no scientific name, we reached Walvisch Bay, where Mrs. Andersson was waiting the arrival of the *Good Hope*, by which to join her husband in Cape Town. Mr. Latham was also there, and he not only undertook to convey my sketches and specimens to Mr. Logier, but, with the generous liberality which we become so accustomed to in the colonies as to think almost too little of it, agreed to take to Town for repair my disabled watch, and lend me, for the journey, his own, which was in perfect order. It was by this, and similar acts from many other friends, that I was enabled to lay down our route to the Victoria Falls with some approximation to correctness.

On our return, in 1863, a parcel of newspapers, received at Lake Ngami, contained the letter from Sir Wm. J. Hooker, Director of the Royal Botanic Garden at Kew, which is quoted in "Nature and Art" for August last; and then I first heard the fortune of my contribution. It appeared that Dr. Ecklon, a talented and well-known Cape botanist, to whom Logier had shown them, considered the aloe to be the "Koker boom," or quiver-tree (*Aloë dichotoma*); but Sir William,

after mentioning the decayed condition of the specimen, wrote :—

"The drawings of the great Tree-Aloe are also most interesting; but the species is certainly not the *dichotoma*, as Dr. Ecklon suspects, but probably a new species."

About the end of May, 1864, during the savage war between the Damaras and Namaqua Hottentots, I was travelling with Mr. C. J. Andersson (who subsequently accepted the command of the former, and by the sacrifice of his property and nearly of his life, secured for them their independence), and passing by Hykámkop and Wilson's Fountain, I again obtained sketches and specimens of the *Welwitschia*, and the Great Aloe, though I never subsequently found one that equalled the magnificent tree I had first met with. From these inferior specimens, growing abundantly among the rocks, I had no hesitation in cutting out a junk of the main stem; and this, instead of showing concentric rings of wood like a timber tree, seemed merely an arrangement of reticulated fibres, partially filled with a soft moist pith, which, when dried up, left them like a loose and open net-work. I took the first opportunity of enclosing a few flowers in a letter to Sir William, who wrote to me that they were decidedly new, though the material was not sufficient to enable him to describe them. I kept a small branch with its tuft of leaves for many months, in the proverbially dry climate of Otjimbengue, and it seemed to possess in an extraordinary degree the power of retaining its moisture and vitality. I believe I might have brought my specimen to England in a sufficiently perfect state for examination, had I tied it loosely in a gunny-bag and kept it exposed to the air, instead of shutting it carefully in a box, which partially rotted it by confining the moisture. The Namaquas at Onanie's Mouth call it the "koker boom;" but, as that name is applied to almost any aloe of which they can make a quiver, and even to some of the small sterculias, this is no proof of its identity with the *dichotoma*. Messrs. Van der Byl and Spence, who had been exploring and "prospecting" a new copper-mine in the direction of Bethany, in Namaqua-land, and who joined the *Good Hope* in the rock-protected harbour of Angra Pequena, brought on board a few young shoots of apparently a similar aloe; and these, placed in half a barrel of sand, were carefully preserved till they reached Cape Town, where, according to Dr. Burchell, a specimen of *Aloë dichotoma* existed in the Government garden previously to 1822. He gives, however, no figure nor description, and Lichtenstein, who travelled in 1803, speaks only by report of the "koker boom," as allied to *Aloë perfoliata*.

The apparent similarity between the great Tree-Aloe and the Dragon-tree of Orotava can hardly escape notice, and especially because, in the common prints of the latter, which are copies of the sixth or eighth descent from the original, the true character of the long sword-shaped leaves is lost, and by clumsy drawing they have been shortened to the more triangular shape of those of the Aloe. So, in truth, the common prints of the Orotava Dragon-tree are much *more* like the Great Aloe than to the object they are supposed to represent.

Whether the gigantic flowering Aloe I have delineated be, as the late Sir William Hooker considered it, really new, is a question for scientific botanists. All I pretend to, is to represent faithfully what I have seen. The reader may easily compare my picture with the stereographs of the Diacœna in Professor Smyth's "Teneriffe," as well as those of the great Tree-Aloe, which I trust will be in the forthcoming work of Mr. Chapman. I should be glad if Mr. Andersson, or some other of my friends travelling in Damara Land next May, would forward to Kew a branch, with its star of leaves wrapped loosely in a bit of gunny bag, and freely exposed to air during the passage, with a few of the flowers dried and some preserved in spirits; and I should be glad to see some future number of NATURE AND ART enriched with a drawing and description of the *dichotoma*, by Mr. Charles Bell, who is now in England, and whose merits as an artist, in the most varied and extended sense of the word, are well known in the Cape Colony.

THE PITCH LAKE.

By FRANCIS W. ROWSELL.

THE Pitch Lake is one of the most extraordinary phenomena of the volcanic kind in the world. In size, if not also in its distinctiveness, it is without an equal, and the interest attaching to it, and to its surroundings, is proportionately great. Its geographical position is not a little remarkable. Situated in the island of Trinidad, which, without disrespect to the other islands, may be called the most beautiful of the British West Indies—indeed, it is known as the Indian Paradise—it is with its sombre complexion and its ever active volcanic springs, a sort of perpetual *memento mori* to the rest of the island. It is the ounce of bitter in the pound of sweet which has been allotted to Trinidad for its portion, and one comes upon it shudderingly after seeing the other districts, and feels a sense of pain at discovering the canker which has found a home in so eminently fair a body. As the Pitch Lake differs in its special characteristics from any other object on the island, so does the character of the country in which it is situated differ from that of the rest of Trinidad. All along the north coast may be seen, in running down from Tobago, a bold mountain range, with few openings in it; but these, when they occur, clothed with the richest tropical verdure. The mountains sheer down

towards the sea, and for the most part throw out a sort of buttress, with a sloping side seaward, which lessens the abruptness of the meeting between land and water, without taking away the idea of grandeur which is conveyed by the height of the mountains themselves. The aspect is beyond question bold, and as one sails along the coast, and looks in vain for some opening, unguarded by either nature or art, he is reminded of the description given by Hollinshed, of Lundy, which is "so immured with rocks, and impaled with beetle-browed cliffs, that there is no entrance but for friends." As soon, however, as the north-west corner has been reached, and the Gulf of Paria entered through either of the Bocas—the Boca de Monas, or Apes Channel, is the narrowest and most dangerous, but the most beautiful—the character of the scenery is altered. The hills retreat into the back ground, and gradually give way, even inland, to lower and more cultivable ground. One of the most magnificent bays in the world, both for size and beauty, lies stretched out before the sight, rivers and mountain streams are there, running down to the sea, amid the most luxuriant plants and trees that the tropics can show; the undulating ground prevents the idea of monotony from entering, and the eye is prevented from wearying with the continued contemplation of so much natural beauty, not only by the varying tints and forms of these beauties themselves, but by the relief afforded by the deep blue sea which, unsullied here by the earth-laden currents of the Oronoque, ripples quietly and peacefully upon the margin of the land. In this bay is Port of Spain, the chief town of the island, and one of the finest in the West Indies, shut in at the back by a range of hills, thickly wooded with all kinds of trees. A description of the bay and its beauties could not be adequately made either by pen or pencil; but it is sufficient for the present purpose, which is to establish a contrast between the Paradisaical appearance of the upper part of the Gulf with the Tartarean gloom of the *memento mori* at the lower part, to say that neither the Bay of Naples, nor Dublin Bay, nor any of the beautiful spots which nature has delighted to adorn in other parts of the West Indies, nor any other place at home or abroad, can compare for loveliness with the bay in which Port of Spain lies. It is beauty paramount.

Mona Point is the northern limit of this bay, and Cape la Brea is its southern boundary, the distance between the two headlands in a straight line being thirty-five miles. As the traveller goes by sea from Port of Spain towards La Brea, he sees a different and less beautiful coast than that he is leaving behind. The land is lower and less attractive, but still so beloved of nature that were it not for the supermagnificence of the neighbouring part, it would be reckoned grand, and absolutely is higher in the scale than the finest parts of some of the other islands, *e.g.*, Barbados. In this district lies the plain of Carapiquaine, backed by the yet more fertile and well-cultivated plain of the Caroni.

A course south and by west from Port of Spain will, in the course of a morning, bring the traveller off the southern point of the bay—Cape la Brea. For several miles before coming to it the land is low, flat, and thickly wooded; mangrove bushes push out into the sea, and there are other tokens of shallows and of a shelving shore. The Cape itself is the head of a small promontory, which juts about two miles into the sea, and contains the site of the Pitch Lake. Within a quarter of a mile from the shore there is good anchorage, and water deep enough for a ship of the line; but inside of that the water shoals rapidly, and, especially when there is more north than usual in the wind, causes a heavy surf to roll. At a distance of six miles from the land a bituminous smell, which grows stronger and stronger the nearer one approaches, indicates the neighbourhood of the Pitch Lake and its belongings. Among the latter is a submarine spring, which manifests itself at a short distance south of the Cape, not always active, but when in motion throwing up large quantities of petroleum and bitumen. Forty miles further south are several mud volcanoes, always more or less active, and in the Bay of Mayaro, in the eastern side of the island, is another submarine volcano; but neither the former nor the latter can be said to be in any way connected with the Pitch Lake, excepting so far as they are all the outcome of some hidden cause beneath the surface.

After getting through the surf, which at times is a very troublesome operation, the traveller lands upon what is no more nor less than an asphalte beach. Large lumps of solid pitch crop out here and there through the earth and cinders which loosely clothe the ground, and the roadway and all the parts exposed to friction show a surface as black and grimy as the floor of a coal-yard. The eye cannot fail to be impressed with the richness of the vegetation, and the deep tints of the green on all the plants. This richness is due to some cause originating in the pitch, whether it operate through the medium of the atmosphere or of the soil, and is not apparent only, as some have suggested, in consequence of the contrast presented by the black ground in which the vegetation flourishes. The soil itself is as light in character as it is dark in colour, and seems to have but little affection for its bed, seeing that it is driven hither and thither by any wind that blows, producing a parched sensation in the throat and mouth, and filling all the pores of the skin and all one's clothes with an unpleasant impalpable powder. Trees are plentiful, and shrubs and quickly-growing plants abound; the land, as has been stated, is generally low and flattish, but rises gradually as the traveller goes inland, until it attains a height at the Pitch Lake of eighty feet above the level of the sea.

A mile along the dusty pitch-road, which now and then is quite bereft of covering, and shows the solid slabs of friable asphalte underneath, brings the traveller to the Pitch Lake itself. Here the smell is overpoweringly strong; having, in addition to the concentrated essence of pitch, a sulphureous flavour, which clings to the olfactory nerves for some time after they have ceased to be exposed to

it. This sulphureo-pitchy scent is perceived at a distance inland of six to eight miles from its source; and seaward, as already stated, it has been noticed six miles from land. The road runs in a pretty straight line from the coast till within a short distance of the end, when it takes an abrupt turn, and brings one out directly on to the shores of the lake. Here, as on either side of the road for the whole way, the number and luxuriant growth of the trees are very remarkable. Nearly all the tropical plants are represented, and, as if not to allow the animal kingdom to be unfavourably contrasted with the vegetable, numbers of the most beautiful butterflies it is possible to see, and of the most gorgeously-dressed humming-birds, flutter and flirt about in the sunlight, or ply in and out among the branches of the trees.

In a circular basin eighty feet above the level of the sea, and about a mile and a half in circumference, the lake of asphalte is contained. The appearance it presents, as one comes suddenly upon it from the road, is very striking. There are scarcely the same conditions as are essential to the existence of a lake of water. Banks are wanting, the road goes straight on, rather rising than descending, until it merges itself in the body of pitch which forms the surface of the lake; and there is another feature which will be noticed presently, that at first sight seems incompatible with the idea of a collection of fluid matter. Again, except at a certain season of the year, the wet season, there is nothing in the condition of the surface of the lake to give rise to the notion that it is in any essential point different from the pitch road over which the traveller has been walking, or the pitchy beach on which he landed. There is, to be sure, a sudden absence of that thick vegetation which has been so observable elsewhere; and a second glance will show that for a considerable distance the trees and plants seem to have been cleared away arbitrarily within a circumscribed compass, small clumps of trees, earth, and shrubs, being left as a sort of outlying remnant, and dotting the black surface at frequent intervals with beautiful little islands, like emeralds in a setting of jet. But for nine months out of the twelve, the visitor may walk off the road into the open, and be unaware that he has really come to the lake until he has advanced some little distance upon it; for the surface is at the edges quite firm and resonant to the tread, and the asphalte, even further in, is, comparatively speaking, hard. Gradually it becomes softer and softer, and the visitor is sensible that he has lighted upon a sort of bituminous quicksand.

When the unstable ground draws, *ipso facto*, attention to itself, and the eye recognises something of design and order in the uniform level of it, and sees how the district is enclosed by a natural boundary, then the visitor perceives how that he is walking on what is really a great reservoir of pitch. He learns that during the months of July, August, and September, the whole of the pitch within that natural boundary is in a liquid and heated state, rendering it quite impossible for a man to walk upon it. Fountains of boiling pitch, mingled with argillaceous earth, and sometimes with water, throw their murky contents to a height of thirty feet into the air. The whole basin is in a simmer, and perfectly liquid to a depth of two or three inches, while below that the pitch is so soft as to yield to the weight even of slight sticks, which sink in and are lost. In those parts where the upheavings are most violent, the pitch is, of course, in a yet more liquid state, though the depth to which it is so cannot, for obvious reasons, be ascertained.

In the cooler months of the year, however, it is quite possible to traverse almost the whole of the lake, avoiding parts which are soft at all seasons, and which give evidence enough of their presence to warn the explorer against falling into them. When this is possible the pitch at the edges of the lake is cool and hard, and as safe to stand still upon as the pitch road; but the farther one goes from the edge, the less firm does his footing become. If he stand still in such places, his feet will leave their prints, and an oily substance will ooze up, pressed out of the asphalte which the foot trod down, and which will, in the course of a few minutes, recover its former level, extinguishing the print, and making a uniform surface as before. It is not safe, therefore, to stand still for more than a minute on such yielding footing. Experiments as to the time necessary to engulph any object may be made with poles, logs, or anything else than living beings, and the shortness of the time required, even in the cool seasons, is astonishing enough. Much depends, of course, upon the weight of the object, but a stout pole, six feet high, such as might be used to walk with, will disappear when planted in the asphalte, in the course of a quarter of an hour. A story is told of a man-of-war's crew being sent up from their ship, which was lying off La Brea, to fill casks with the pitch, which was to be sent to England. The casks were landed and rolled up on to the lake; the seamen began cutting out the pitch and filling the casks, when all hands were recalled by signal in order to chase some suspicious-looking craft at sea. When they returned to the lake to finish their task, they found that their casks and implements had vanished, swallowed up by the treacherous and greedy asphalte, which "left not a wrack behind." The people cut the asphalte out in blocks with axes and spades, and such is the closing up power of it, that though they may scoop out enough on one day to load a ship, the next morning there will not be any trace of the removal, the surface will have resumed its smoothness, and the quantity abstracted will have been filled up from beneath.

At all times there are some, but in the cool times there is an infinite number of small islets, richly clothed with shrubs and small trees, dotted here and there about the lake. Few of them are more than thirty feet round, and they are mostly circular in form. These, too, are liable to sudden and complete catastrophes. That which was yesterday a flourishing oasis in the black Sahara—the

pride of the lake, and which seemed to enjoy an immunity from destruction, even though the molten pitch boiled and bubbled close to its borders—may to-morrow have vanished clear away, so that "the place thereof shall know it no more." Other islets will succeed, born of the caprice of the asphalte, without apparent reason why or because; and they will endure, like their predecessors, for a while, to be like them snuffed out at the last.

There is another very remarkable feature about the Pitch Lake, which has been already alluded to, but not mentioned. It is the liberal system of irrigation which has been provided on its surface, by means of numerous small natural canals that intersect the asphalte in all directions, crossing and mingling with each other, but never combining so as to form one large body of single stream water. These canals are seldom more than seven feet broad, more often they are from one to three feet. Their depth is generally equal to their breadth, their sides slope inwards till they meet in a point at the bottom, so that they may be said to be triangular troughs cut out by themselves in the pitch, over the face of which they run in an irregular course, fulfilling some function which is not, however, very apparent. They are filled to the brim with the clearest possible fresh water, which is not stagnant, but runs on with a slow current, that would seem to be proper to the circulatory system which the contriver of them has established, though neither the cause nor the effect of it has been scientifically explained. Fish, and report says alligators, have been found in these streams, of which the water is clear and perfectly fresh, though tainted with a flavour of pitch. The bottoms of some of the canals are exceedingly soft; poles thrust into them disappear almost immediately. Others, however, allow of being stood upon.

These *fresh* water courses are the more extraordinary that the lake is supposed to be in direct communication from below with the sea. Not only is it reasonable to suppose that the submarine volcano which, a short distance south-west of Cape la Brea, throws out large quantities of a mineral resembling in composition the mineral in the lake, is in communication with the lake, but actual experience has shown that between the lake and the sea there is some free channel. Poles, marked for sake of identification, have been thrust into the lake and engulphed, and in the course of a few days afterwards they have been picked up on the sea-shore —so that it is evident there must be some means of communication between the lake and the sea. It would be but a speculation, founded on no actual experience, to say that there is concert between the pitch spring and the lake on the west side of the island and the submarine spring near Point Mayaro on the east side. Such concert is, however, extremely probable, and it is, moreover, likely that the mud volcanoes already spoken of as in action forty miles south of Cape la Brea, are but different manifestations of the same principle which is in operation beneath the Pitch Lake. Whether this be so or not, it is very remarkable that volcanoes which have produced the most disastrous effects upon places more remote than Trinidad from the scene of their first ebullition, should have spared to molest Trinidad itself. In 1797 an earthquake violently shook the Antilles, but it was not felt in Trinidad; and a short time afterwards, when the province of Cumana on the mainland, extending to the Gulf of Paria, was desolated by a like catastrophe, the shock was only slightly felt in the island, and there was not in consequence any perceptible difference in the operations of the various volcanoes existing in it. In 1812 the city of Caraccas was destroyed by an earthquake, and thirty days afterwards the Souffriere mountain in St. Vincent's, distant 400 miles in a straight line and separated by that length of sea, burst out with signal fury after a silence of ninety years. Rumblings had been heard at intervals during the month between the outbreak at Caraccas and the outbreak at St. Vincent's, and there were other signs which went to show that the two were connected and proceeded from the same cause. Trinidad, however, felt nothing of all this disturbance, and there is no memory of disastrous eruptions having been experienced there. It enjoys a singular and estimable immunity from serious earthquakes and evil-doing volcanoes, as it does from hurricanes; and catastrophes which involve districts adjacent to it in ruin pass it by without suffering it to endure more than the shock of a slight concussion. Nature has been lavish of her bounties to the place, and has poured out her gifts of beauty with liberal hand. She has, however, provided in the Pitch Lake, and in the harmless volcanoes in the neighbourhood, a visible warning against a feeling of false security. The pitch, which has hitherto done no more than overflow its basin and cover the country for some distance with a thick skin of asphalte, even extending its operations to the sea which it underruns for some way from its brink, may at any time belie the experience of the inhabitants and show itself in the terrible shape of an active discharging volcano, having a crater some two miles in circumference, full of the most destructive and ruthless agents it is possible to imagine. What has actually occurred there in times long past it is not possible to know. The historical records of the island are few. Trinidad was discovered by Columbus in 1498, when it was thickly populated by Caribs; but the Spaniards failed to take possession till 1588, and thereafter, as the island did not yield gold, it was neglected by them, and was not at any time much noticed by the sea-faring nations. It was not till 1797 that it came into British hands by conquest, and it does not appear that before that time there was any public account taken of what happened in the island: at all events, no such record remains, so that we are considerably in the dark as to the antecedents both of the Pitch Lake and of the other volcanoes. What we do know, however, warrants the remarks that have been made; and though the character of the basin of the lake would not seem to betray a volcanic tendency—it is of clay,—there is nothing to show

that beneath the surface, or rather beneath the level of the sea, there is not a slumbering volcanic agency which at any time might bring destruction on the island.

It is much to be regretted that so little attention should have been paid to this extraordinary phenomenon by geologists and professional surveyors of nature. M. de Verteuil, a native of Trinidad, says in his interesting work on the island, published in 1858:—"Excepting Mr. C. Deville, who made but a short stay in Trinidad, no professional geologist has ever visited the island." The consequence is, that not much satisfactory information is upon record to show the character of the formations and strata, and, incidentally, the source and origin of the pitch springs. Humboldt suggested that they probably proceeded from the beds of limestone which form the Brigantine and Cocollar on the mainland; and he seems to have had no doubt that the causes which produced the pitch springs on the main were also the causes of like effects in and around the island.

Humboldt and all who have given scientific attention to the subject are of opinion that the island was once part of the continent, an idea which readily finds credence in the mind of any one who has seen the chain of islet limbs which stands between the two both on the north and south. The geological formation of the continent and the island confirms the supposition. On the opposed sides of each is found the bluish-gray transition limestone, destitute of petrifactions, and traversed by veins of calcareous spar; gypsum, sandstone, and micaceous schists, which abound all over Trinidad, are abundant in Cumana, and on the shores of that province may be seen pitchy springs differing in no essential particular from those of the island. They exist in the Gulf of Cariaco, and at El Buen Pastor, near the Rio Areo, between which place and Cape La Brea, a distance of 105 miles, De Verteuil says, the geological identity of the two lands may be distinctly traced.

The following extract is from De Verteuil's book, the only really valuable work on Trinidad that has been published. (Ward & Lock, 1858.)

"Bitumen, or fossil pitch, exists in inexhaustible abundance throughout the whole of the southern division. Point La Brea, in the county of St. Patrick, is formed altogether of hardened pitch, which extends into the gulf. The Pitch Lake, with the village of La Brea, in the same locality, is the great natural curiosity of Trinidad, and is really worth visiting. A pond of soft bitumen also exists within the site of the town of San Fernando, and another between Moruga and Guayaguayare. The latter is known by the appellation of 'Lagon Bouf,' from the peculiar noise produced by the bubbling of the soft bitumen. At Oropuche, Guapa, and Quemada are likewise small craters of the same substance. About two miles from the Yaro, in the spring of the year, a periodical but brief submarine eruption occurs, throwing up quantities of petroleum with which the beach is afterwards strewn. Many of these bituminous craters exist at the bottom of the gulf along the line of coast from San Fernando to Trois; their eruptions occasionally agitate the waves and eject considerable quantities of petroleum. The pitch cast upon the beach is generally in the form of lumps or cakes.

"It is to me evident that our pitch deposits must have a submarine communication with those of El Buen Pastor, in the canton of Maturin."

Naturally enough it was supposed that the pitch of the Pitch Lake would be available for the purposes of commerce. No more persevering pursuer of the idea than the late Earl of Dundonald, when Admiral Cochrane, and his efforts were supplemented by those of a company called the Pitch Company; but it was found that, except for the purpose of road-making, for which it is truly excellent, the cost of refining so as to render the pitch useful for all other purposes for which pitch is used, was so great as to exceed the market price of pitch obtained elsewhere. Many shipments of it have, however, been made within the last few years to America and to France, and although at present the means have not been found to utilise it to the utmost, it is to be hoped that science will not rest satisfied with her hitherto abortive attempts, but will ere long open a large and useful branch of trade in the grim contents of the Pitch Lake.

At present the uses to which the bitumen is put are for flooring stores, for paving purposes (part of King Street, Port of Spain, is paved with it), and mixed with lime and gravel, for bricks and building slabs. United with wood or refuse sugar-cane it answers very well as fuel, and from it may be distilled a large percentage of petroleum.

It seems that the cargoes exported by Lord Dundonald's company were not of the best. The pitch was found to contain from 30 to 35 per cent. of earthy and saline matters, and from 15 to 20 per cent. of water; and the cost of getting rid of what amounted to about 50 per cent. of the cargo, for all of which freight had to be paid, was so great as to preclude the idea of establishing a trade in it, and the company, not being backed with a capital large enough, gave over their attempts. It has been suggested that pitch taken from nearer the centre, where it is always more or less liquid, is much freer from the impurities which discouraged the projectors, and might be advantageously worked. Abraham Gesner, the American chemist, who says that he obtained kerosine first from Trinidad pitch, also says that he obtained from one ton of pitch forty-two gallons of oil proper for lamps, and eleven gallons fit for lubricating purposes. According to his observations, the pitch on the borders of the lake yielded more oil than that at the centre. The smell of it, however, was very offensive, and getting rid of that, in addition to the cost of distillation and fetching, seems unlikely to allow of petroleum from such a source coming into competition with that which wells up from the ground direct from Nature's retort.

As a matter of fact, there is no regular export of the pitch. A careful examination of the records in the office of the Board of Trade shows that it has not up to this time been utilized to such an extent as to warrant its being mentioned in the statistical returns of commerce. Locally, it is employed for the purposes already mentioned, and it is also used medicinally for the same objects as Barbados tar, to which it bears a considerable resemblance. The difficulties in the way of utilizing it on a large scale, so as to assure reasonable profit for capital and

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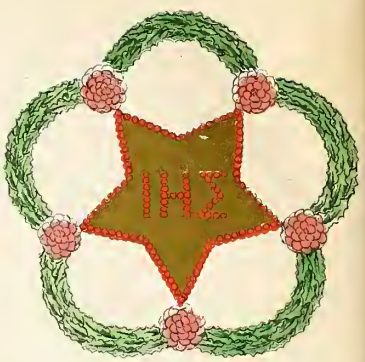

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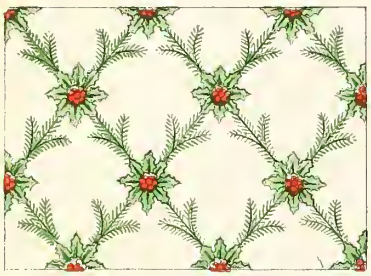

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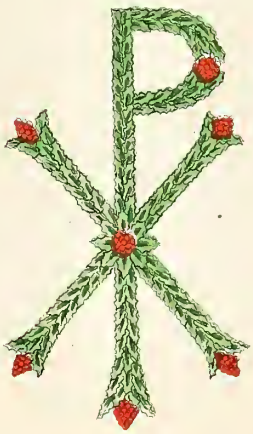

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labour, have been hitherto so great as to prevent the establishment of regular traffic in a substance which at first sight would seem, both from the usefulness of its component parts and from the inexhaustible supply of it, to offer prospect of a trade as lucrative as that brewery of which Dr. Johnson said that there was in it "a potentiality of wealth beyond the dreams of avarice."

FLORAL DECORATION OF CHURCHES.

By W. & G. Audsley, Architects.

CHRISTMAS.

MUCH has been done during the last five-and-twenty years towards the advancement of all branches of ecclesiastical architecture and art; and large sums of money have been willingly expended in the restoration, building, and decoration of churches. Unquestionably we have made great progress in architectural art, and many of our modern churches can vie with any of the ancient in richness of material and elaborate workmanship; but we are still behind in coloured decoration, notwithstanding what has been done, and the majority of our sacred edifices are still devoid of any attempt at coloured enrichment.

In ancient times no church was considered complete until every available portion of its interior was richly painted with appropriate ornaments, or adorned with scripture, legendary, and saintly histories. Then every wall spoke of the great truths of our most holy faith; and of the lives and martyrdoms of the saints. Then every detail of the architecture stood forth in the rich bloom of finely contrasted colour, which, harmonizing with the costly hangings and precious embroideries and furniture of the sanctuary and its altar, produced an effect which we can with difficulty realize, even in imagination, in the present day. Besides these permanent decorations, there were others which were called into the service of the Church on the great festivals and other particular occasions. Of these, the most important and beautiful were flowers, fruit, and foliage—precious gifts sent by God for His own glory and our delight; and such as we should on all possible occasions be careful to dedicate to His service in the adornment of His altars and His sanctuaries.

It is on the Floral Decoration of Churches that we in this place, and at this time, desire to say a few words, and give a few hints. One of the great festivals of our Church is rapidly drawing near. In a very few weeks, Christmas, with its usual festivity and happiness, will be here, and busy hands will be twining the holly wreath and hanging the mystic mistletoe in each home of our land; while in many, we sincerely trust in all, of our churches, willing hands will be found at their labour of love, decorating the sanctuaries of our Lord, in commemoration of that great day when He came "veiled in flesh" to dwell amongst men.

> "Born that man no more may die,
> Born to raise the sons of earth,
> Born to give them second birth."

We sincerely desire to lend a hand in the good work, and we are of opinion that we cannot do so in a more efficient way than by offering, in the pages of Nature and Art, a few simple directions and hints for the guidance of those who are able and willing to devote a portion of their time and attention to the decoration of their churches, but who have not any decided ideas regarding the correct and most beautiful manner of doing so.

We are aware that there are many to whom the following lines will suggest nothing new; many there are, indeed, who could add most ably to them; and would that we could have their valuable assistance. To such persons, of course, our short essay is not addressed; but we are assured that the majority of our readers, who take any interest in the subject of Floral Decoration, may here find some useful hints; and we hope that they may be induced to give our suggestions a fair trial in their several churches for the festival of Christmas.

Before proceeding to any practical details, we must, at the risk of being pronounced somewhat impertinent and officious, give a piece of sound advice to all decoration committees. As a general rule these committees or clubs, as they may be called, are composed of volunteers who come forward from their several congregations. These hold very decided views, each one being convinced that he or she knows all about the subject, and could decorate a church to perfection if others would only attend to, and work under, his or her directions. But, alas! all who come forward desire to be considered learned in the art of decoration, and expect to be appointed leaders. Things may go on pretty well until the real work is commenced, when out come each individual's decided opinions and intentions. All are at once rich in ideas and prolific in whims, and indignant that they are not carried out. The result of all this is that some give up the task and leave in a vexed and angry spirit, thinking their opinions have not been properly appreciated, and those who remain do as they think best, and the decoration turns out, as might be expected, to be incongruous and incorrect. Let each committee, be it composed of ladies or gentlemen, or, as is most usual, of both, before proceeding to work, arrange a definite scheme for the decoration in hand; appoint the most competent person they can command, to act as director; and agree to work under his or her leadership. If this be done, more work will be got through, and a more uniform and perfect result will be obtained, than by any other mode of proceeding.

Having premised, then, that a scheme should in

all cases be decided upon before the absolute decoration is commenced, we cannot do better in this place than say a few words on the general design and disposition of floral decorations with reference to the several styles of church architecture, and the various portions and details of church interiors.

In decorating a church attention should be paid to the style in which it is built; and the ideas for the floral enrichments should as a rule be derived from the usual details of the architecture. Above all, care should be taken to retain the general feeling of the style in the decorations.

In Norman work we find great massiveness and breadth of treatment; the round arch used for all openings; arcades composed of intersecting round arches; columns horizontally banded or ornamented with spiral, zigzag, or diaper patterns; mouldings enriched with the chevron, cable, chain, bead ornament, &c.; flat surfaces of wall covered with a species of trelliswork diaper, both with and without small enrichments at the intersection of its lines; lozenge-work, scale-work, and parallel rows of zigzags placed over one another; and lastly, we observe a total absence of those cusped forms so common in the later styles.

In essaying to decorate the interior of a church in the Norman style, it is important that great simplicity of form, massiveness of character, and breadth of effect should be sought after, so that the decoration in the mass may harmonize with the architecture. This may be secured by adopting simple forms for all the ornaments, and using large quantities of evergreens, &c., in their construction. As the round arch is one of the distinctive features of the style, and as cusped or foliated forms do not belong to it, the simple circle should invariably be adopted for enclosing devices which are to be hung upon the walls (as in Fig. 3, Plate I.), and no such forms as the trefoil, quatrefoil, or cinquefoil, should in any case be used. The arcades formed of intersecting semicircular arches, which are so frequently to be found in rich examples, supply us with a good idea for the ornamentation of the lower portions of chancel walls, where no important enrichment already exists. These arcades may be constructed of stout wire or light wood, and covered with evergreens relieved by holly berries and whatever flowers are at hand. In the construction of arcades of this description, there is great room for the display of taste and skill.

The great size of the generality of Norman columns renders their decoration, if richly done, a matter of considerable labour. Perhaps the easiest method of ornamenting the large circular piers of the style is by banding them with plain wreaths or broad open bands, similar to those shown on Plate II., Figs. 8 and 9. Those columns which are banded architecturally may have a single wreath laid round the shaft immediately above, and resting on the band; or they may have two wreaths or open bands fastened round the shaft, one between the base and centre-stone band, and the other between the latter and the capital. A plain circular column may be beautifully decorated with a spiral wreath, or with two running in opposite directions; the latter will cover the column with an open diaper. Of course, neither of these methods of wreathing large columns must be attempted where material and labour are very limited. All small columns which stand quite free from the stone-work should be ornamented with a single spiral wreath, taking not more than three turns (Fig. 10, Plate II.). Irregular and grouped Norman piers should not be decorated with wreaths or bands; and, indeed, as there is no satisfactory way of ornamenting them, they had better be left without any floral enrichment.

In treating large surfaces of flat wall, several methods can be adopted, according to the amount of material and labour at command. They may be decorated in a very appropriate way by bands of zigzag and interlaced semicircles (Figs. 8 and 9, Plate II.), or designs of a similar nature, placed at some distance from one another, with medallions between them; or they may be covered with diaper patterns, such as Figs. 8 and 10, Plate I., which are based on the trellis-work, diaper, and scale-work of the style.

It is not advisable to attempt to fasten any species of floral enrichment to Norman mouldings, but thick cables or twisted ropes of holly may be laid over hood-moulds or string courses with very good effect. They may be fastened to small wire hooks driven into the joints at intervals.

Any or all of the symbols, monograms, and devices which are appropriate for the Festival of Christmas, may be used in the decoration of Norman work, and they should in all cases be enclosed within circles of evergreens.

In Early Pointed architecture we find considerable severity and breadth of treatment, but an almost total absence of the massiveness so characteristic of Norman work. The pointed arch has superseded the round, and has given unlimited play to the genius of the builder; it has brought lightness, grace, and elegance in its train, to clothe every detail with a new beauty.

The style is rich in arcades, formed of pointed arches, which are never interlaced as in the Norman style. Columns are usually banded with one, two, or three horizontal bands, but are no longer enriched with surface patterns. The single circular shaft continues to be used, but, in rich examples of the style, grouped columns are more frequently met with. Mouldings are not so richly ornamented as in the preceding style, but are worked into more members, separated by deeply-cut hollows.

In Early Pointed work many beautiful diapers are to be found covering large spaces of wall, as at Westminster Abbey; and flowing scroll-work is also used as a surface enrichment. In very early buildings few cusped forms are to be met with, but as the style was matured, simple geometrical forms such as the trefoil, quatrefoil, and sixfoil became very common.

In the above short summary we find enough to assist us in framing a correct scheme for the decoration of Early Pointed structures. The fact that a greater degree of lightness prevails in them than in

Norman, at once tells us that care must be taken not to construct the decorative materials of a very massive description, and as the architectural features generally are more refined and elegant, the floral ornaments should be made in keeping. As the pointed arch is an important and characteristic feature of the period, and as the round arch, although sometimes used in very early work, is no longer consistent, it is obvious that wherever arches are introduced in the decorations, they must be of the pointed or lancet shape. Arcades may be used as in the Norman style, but they must not be of interlaced arches. Columns, when circular, may be ornamented, as in the preceding style, with bands of evergreens, and their capitals, when not carved, should be enriched with chaplets of holly, berries, and flowers.

Single spiral wreaths of small size may be twined round the columns, although they are not so consistent as when applied to Norman shafts. Piers consisting of several small columns placed round a centre one are frequently met with, and when the columns are sufficiently numerous to leave moderately sized spaces between them, vertical ropes of evergreens may be hung in the spaces from the capitals to the bases. Should the columns stand sufficiently far from the centre pier to admit of wreaths being passed behind them, the pier may be wreathed spirally, allowing the small columns to stand in front of them, or the detached columns may be delicately wreathed, and the centre pier left plain. When columns are constructed of attached members divided by deep hollows, ropes of evergreens may be pressed into all the hollows, but they should never be wreathed spirally. In Plate II., Figs. 11 and 13, are shown an elevation and section of portion of a quatrefoil column having ropes of holly down its four angles.

Mouldings may be ornamented in the same manner as the columns with attached members; that is, they may have ropes of evergreens pressed into the most important hollows, and small bosses of holly leaves, berries, and flowers, may be placed at intervals in the minor hollows. It is of course obvious that either of the above methods of decorating mouldings may be resorted to alone.

Diapers may be used to any extent in ornamenting wall-spaces, but they should not be of too massive a description; those as shown on Plate I., Figs. 8, 9, and 11, are very suitable; perhaps Fig. 9 is most to be recommended, as it displays the pointed form.

For the decoration of spandrils or tympani of arches and other small spaces of wall, flowing scroll-work may be used with great effect. It may be formed of holly, &c., on a ground-work of stout wire bent into the proper forms, and soldered, or otherwise securely fastened together. The scroll-work, when finished, may either be suspended in its place, or secured, if it is on stone-work, by two or three wire hooks driven into the joints of the masonry. Creased ribbons, bearing illuminated texts, form very suitable enrichments for spandrils or spaces over windows, doors, &c. Bands bearing texts may be hung under the cornices of nave and other walls where admissible. Medallions containing sacred devices should be used in all cases where favourable spaces occur, such as between nave arches and side aisle and clerestory windows. Figs. 2, 3, and 4 on Plate I., and Figs. 4 and 5 on Plate II., supply designs perfectly suitable for this purpose. Over the chancel arch, where no permanent decoration exists, a large device, in which the cross forms the principal feature, should be suspended; a suitable design for this is given in Plate I., Fig. 5. On each side of this centre medallion, in the centres of the remaining spaces over the arch, small medallions containing an alpha and omega may be placed.

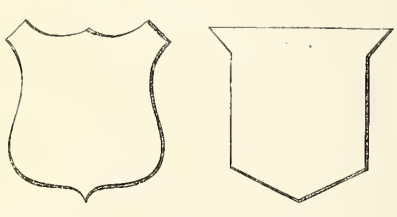
The decoration of Middle Pointed buildings may be executed in a similar style to those just described, and with the same designs as far as they go, but we can now introduce two very important ornamental adjuncts in the shape of emblazoned shields and banners, bearing symbols, monograms, or other devices. These should in all possible cases be associated with floral patterns. Fig. 1, Plate II., shows the banner associated with a rayed circle of holly and spruce fir; and Fig. 1, Plate I., and Figs. 2 and 3, Plate II., show shields enclosed in floral devices. Crosses either composed of evergreens only, or of evergreens with richly coloured ground-work (as Fig. 6, Plate II.), may be used wherever suitable spaces occur for them. The most suitable positions for designs similar to Fig. 1, Plate II., are in the spandrils of nave arches, or between clerestory windows, where flat spaces of wall occur. In small panels, such as are frequently met with in Middle Pointed architecture, coloured shields charged with appropriate emblems, &c., may be placed without any floral work, the cusps or mouldings of the panels taking the place of the evergreen outlines, as in the case of the medallions before described. Stars may be used in place of the shields if preferred.

We may here remark, although what we are going to say is equally applicable to works in all the styles, that in every case great care should be taken with, and the most elaborate ornament devoted to, the decoration of chancels, and particularly the East walls of same. Where rich reredoses exist, their decoration with evergreens and flowers must be a matter to be decided by some competent person in each individual case, for it is perfectly impossible for us to give even general directions beyond the recommendation to do what may be decided on with the choicest materials procurable. If such a feature as an arcade should exist in the east wall of a chancel, taking the place of a reredos, its columns, if of marble, should be banded or wreathed with everlasting flowers, attached at short intervals to coloured ribbon, or strips of coloured cloth. The most suitable flowers for this purpose are those of a bright orange and scarlet colour about the size of a florin. If the columns are of stone, they may be wreathed with evergreens, relieved at intervals with everlasting flowers. In chancels where the East wall is not richly ornamented, a large floral cross, with a gold star in its centre, becomes an appropriate and highly desirable ornament above the altar.

The decoration of Late Pointed buildings is by no means so easy, the general details of the architecture not being of so distinct a character, or so susceptible of tasteful enrichment by floral appliances. In rich examples, all the wall spaces will be found covered with panelling, the columns moulded, or having small shafts attached to them, and separated by large shallow hollows, the arches much depressed, and their small spandrils panelled. The windows are very large and consequently leave but little wall-space between them. The style is also rich in screen and tabernacle work, but seldom shows arcades of any importance, the ordinary panelwork taking their place.

In simple buildings but little panelwork is met with. Plain octagonal columns take the place of moulded ones, and, generally speaking, more wall-space is found than in the more developed examples.

In considering the decoration of buildings of this period we must therefore conclude that small details in constant repetition must be decided on. In the ornamentation of walls covered with panels, it is advisable to insert small devices either in the shape of coloured shields or floral work in the centres of the panels. Columns when moulded are better left undecorated, but when they are octagonal they may be wreathed spirally or have their capitals surrounded, when uncarved, with chaplets of evergreens. Mouldings may be left undecorated or have patterns of evergreens inserted at intervals into their large hollows. The screen and tabernacle-work of the period may be decorated, when of a simple and defined character, but when very rich and complicated, as in many of our large buildings, floral enrichment should be dispensed with or used very sparingly. Temporary screens, richly covered with evergreens, banners, scrolls, and shields, form most appropriate ornaments in those churches where permanent screens do not exist, or indeed in any case where they may be inserted. These screens should be formed of light timber work and wire. Banners and shields may be used to any extent in the decoration of Late Pointed churches, and almost any shape of the former may be adopted as taste or circumstances suggest, but the latter should be of either of the forms shown in woodcut below, instead of that on our plates.



Having briefly considered the manner in which the schemes for the decoration of churches in the various styles of mediæval architecture should be determined and developed, we have now to say a few words on the symbols, emblems, and monograms most suitable and appropriate for the Festival of Christmas.

Generally speaking, far too little attention is paid to the selection of the symbols and other sacred devices for the different seasons of the Christian year. Indeed, the whole collection of symbols, emblems, and monograms which have been introduced by the early artists, and which have been dedicated to the service of the Church ever since it struggled under persecution in the catacombs, has of late years been looked upon as a sort of stock set from which anything that strikes the individual fancy may be taken for any purpose or for any season. We have great hopes, however, that matters will be altered, and that as Christian art comes to be better understood, we shall not have to blush for the mistakes made, and the ignorance displayed, in quarters where all things should be as perfect as minds and hands can make them.

Of all the Christian symbols the cross is at once the most universal and beautiful, and its use, under certain conditions, is allowable at all seasons. As a Christmas decoration, the Cross need not be made very prominent, and in no case should the Latin form be adopted, although, owing to a very popular and mistaken idea that this form is the only proper one, it has long been almost exclusively used in Christmas decoration. It must be understood that the Latin Cross is derived directly from, and represents the actual Cross on which our Blessed Lord suffered, and is termed in its simple shape the Calvary or Passion Cross. Now it is obvious that at Christmas, of all seasons of the year, we should have no wish more particularly to allude to the Passion of Our Lord, than we have desire on Good Friday to commemorate His Birth or Resurrection. The Cross which is alone suitable and appropriate for the Festival of Christmas, is the Greek. This form is in reality the original cross idealized, and although it may be adopted as a Symbol of Christ, it is more properly accepted as expressive of the Religion of the Cross—to be the emblem of Christianity, rather than the sign of the Atonement.

We mentioned above that, in Christmas decoration, the Cross need not be made very prominent. We do not wish it to be understood that we consider that the symbol should at any time take a secondary position. What we mean is that at Christmas, when everybody and everything should wear the garb of joy and gladness, the cross should not stand forth in its severity, but should be grouped with other forms which allude to the event we are commemorating. The centre design in Plate I. is an example of this treatment of the Cross, and it will be observed that while the Cross distinctly asserts its beautiful form, its interest is divided with the star placed within the emblem of eternity, and bearing, as the centre of all, the monogram of the Blessed Name of JESUS.

All the varieties of the Greek Cross may be used, but the most beautiful and appropriate are the Cross Fleurie and Cross Patonce; the latter is shown in Fig. 5, Plate I.; the former, issuing from behind the shield, in Fig. 1. It will be observed that the arms of the Cross Patonce gradually spread outwards from the point of junction, while those of the Cross Fleurie remain straight, until near their

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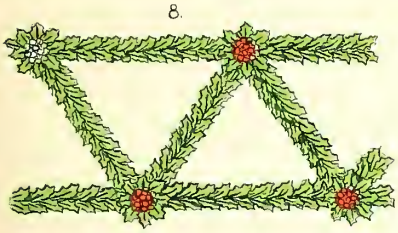

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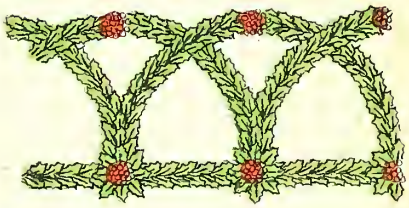

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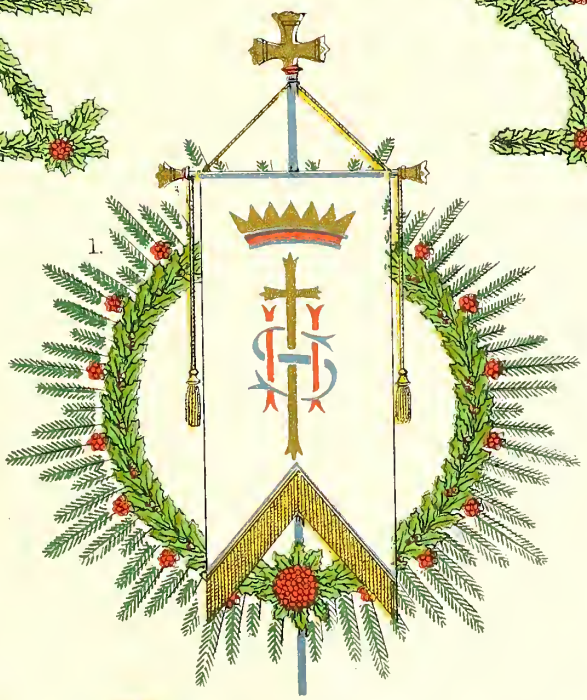

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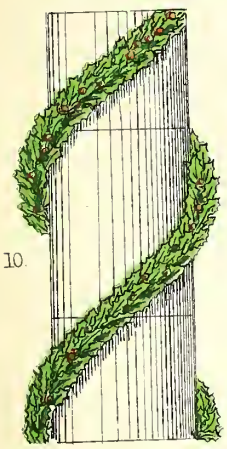

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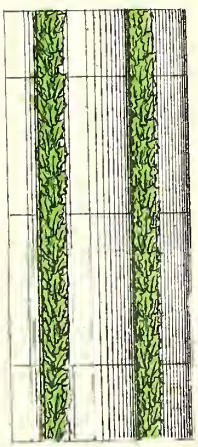

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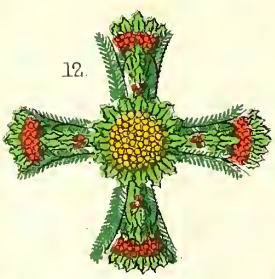

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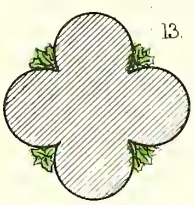

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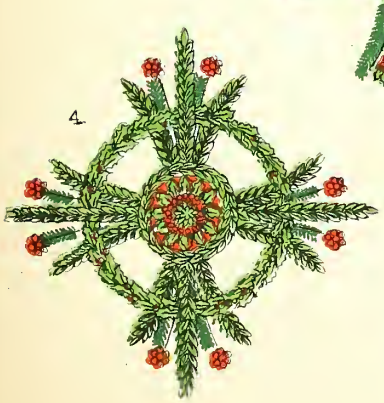

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extremities. A very pleasing form of the Cross is shown in Fig. 6, Plate II.; it is nothing but a Cross Patonce, with the foliations of the arms cut off. This form is very suitable when a Cross with coloured and inscribed arms is required, as in our design.

The Agnus Dei, or Divine Lamb, and the Lion, which are symbols of our Lord, are most appropriate for Christmas. They may be depicted on shields and banners, or in aureoles enclosed in floral medallions, as in Fig. 3, Plate I., which shows the Agnus Dei in an aureole, occupying the centre of a six-pointed star, and surrounded with the circle. The Pelican, as a figure of our Lord, should not be used, as it particularly alludes to His Passion. The Fish, however, is a proper figure for Christmas. It has been adopted as a figure of our Saviour because the five letters forming the word fish, in Greek (ΙΧΘΥΣ), when separated, supply the initials of the five words—

Ιησοῦς Χριστὸς Θεοῦ Υἱὸς Σωτὴρ.
Jesus Christ (the) Son of God (the) Saviour.

All the monograms of our Lord's name are appropriate for Christmas decoration, whether used as independent ornaments (as in Figs. 6 and 7, Plate I.), or on shields, banners, and medallions. The monograms most usually met with are those which are composed of the two first and the last letters of the word JESUS, in Greek (ΙΗΣΟΥΣ). The two first letters I (Iota) and H (Eta) always remain the same; but the last letter assumes three forms—S, C, and Σ, which are the three forms of the Greek sigma. These monograms may either be formed of Greek letters (as in Figs. 2 and 6, Plate I., and Figs. 1 and 5, Plate II.), or of Gothic letters (as in Figs. 4 and 5, Plate I.). When the letters are entwined, it is usual to elongate the I, and form it into a Cross (Fig. 6, Plate I.). The monograms of the name of CHRIST are formed in a similar manner from the first two and last letters of that name in Greek (ΧΡΙΣΤΟΣ), or, as is most usual, from the first letters only (Χ Ρ). Both these forms are shown in Fig. 7, Plate I., and Figs. 2 and 5, Plate II. With all the monograms of our Lord's name, the Alpha (Α) and Omega (Ω) may be grouped.

Those of our readers who desire to become acquainted with the interesting subject of Christian Symbolism, will find it popularly treated in our "Handbook;"* and we must refer them to its pages for full particulars relating to the symbolism of the Cross, the symbols and emblems of our Lord, and all the various monograms of His name.

Of all the ornaments to be used in Christmas decoration, the Star is, of course, the most important, and should be freely introduced, either alone or in conjunction with the symbols and monograms above alluded to. A large and fine star containing the Agnus Dei, or the monogram of the name of JESUS, should invariably occupy a prominent position on the east wall of the chancel. When placed above the altar, which is the best position for it, it should occupy the centre of a Greek Cross. The most important position for the Star in the nave is over the chancel arch, where it should also be grouped with the Cross. Fig. 5, Plate I., illustrates the treatment we have just described. Stars of any number of points may be adopted, although five, six, and seven points produce the most beautiful forms. It will be observed, on examining Fig. 4, Plate I., that the symbol of the Holy Trinity—namely, the interlaced triangles, forms a perfect Star of six points; and this symbol is most appropriate, and may be freely used on the walls of chancels, or placed, on a large scale, over chancel arches. Fig. 3, Plate I., shows a six-pointed Star enclosed within a circle (the emblem of eternity), and having in its centre an aureole containing the Agnus Dei. Fig. 2 shows a five-pointed Star, charged with the monogram ΙΗΣ, and enclosed in a cinquefoil. In Fig. 1, the centre shield is charged with a gold Star of seven points; Fig. 6, Plate II., shows a gold Star in a blue aureole (symbolical of Heaven) occupying the centre of a Cross; and Fig. 5, on the same Plate, shows two six-pointed Stars, one placed behind the other, with their points counterchanged, in a quatrefoil, and surrounded by the monograms ΙΗΣ, ΧΡΣ, and the Α and Ω. The latter composition is appropriately surmounted by a floral crown.

We may now say a few words on the shields and banners suitable for Christmas decoration. The most appropriate grounds for shields are gold, red, and white; and for their charges, gold and silver (or white), when the field is red, and red and blue when the field is gold or white. Other colours may be adopted, if preferred. The most appropriate charges for shields are the symbols and monograms already enumerated, and the following devices of minor importance—namely, the Latin word REX surmounted by a Crown (Fig. 3, Plate II.); the Star; the Star and three Crowns, in allusion to the Adoration of the Magi; the monograms of the Virgin, M and AM, entwined, and surmounted by Crowns; a bunch of Lilies, the emblem of the Virgin; and two Shepherds' Crooks, crossed, in allusion to the heavenly message given to the shepherds, as they watched their flocks by night.

We may here state that the publishers of this periodical have prepared for sale, from our designs, a series of shields, in gold and colours, suitable for Christmas decoration, and also several designs for grounds of Crosses, after the style of the Cross (Fig. 6, Plate II.). They have also printed alphabets of initial and black letters for texts. The initials are on richly-coloured square panels; and the small letters are designed so as to be easily cut out, having no curved lines in their formation.

Banners should, in all cases, be white, which is the canonical colour for Christmas, and have gold-coloured cords, tassels, and fringes, and they may also be bordered with blue or red. The same charges as are suitable for shields are also suitable for banners; but as banners are usually made of

* "Handbook of Christian Symbolism." Day & Son (Limited), London.

a pretty large size, they present a greater opportunity for the display of tasteful enrichment and complicated ornament than the ordinary shields possibly can.

Having briefly touched upon the most important points of our subject, we shall now conclude by giving a few directions as to the construction of the decorations we have recommended. We shall do so in distinct paragraphs, alphabetically arranged, for the sake of reference.

Arcades.—The ground-work for arcades may either be constructed of light timber or wire, to which the evergreens may be attached by tacks, string, or tying-wire. When the arcades consist of interlaced semicircular arches two kinds of evergreens may be used, one on each set of arches. Rosettes of holly-berries or everlasting flowers should be placed at the points where the arches cross each other, and rich bunches of leaves, flowers, &c., should be fastened where the arches spring from the uprights. These bunches are intended to take the place in the decoration that the capitals of the columns do in true arcades. Arcades composed of pointed arches may also be wrought in two kinds of evergreens, the standards being in one sort and the arches over in another, the points of junction being treated as above described, to convey the idea of capitals. Where very rich arcades are required, their standards, beside being covered with evergreens, may be further enriched by spiral wreaths of flowers attached to tapes, and their arches may be studded at intervals with rosettes or bunches of holly berries.

Bands.—The open bands which we have recommended for wall and column decoration should be composed, when for the latter purpose, of wire or narrow bands of perforated zinc soldered into the form required. When for walls, they should be composed of timber or perforated zinc strips as before. These are to be covered with leaves in the usual way, and may be ornamented, as shown in Plate II., with rosettes, &c.

Banners.—The most suitable material for banners, and at the same time the most inexpensive, is thin white calico, and their fringe, cords, and tassels may be either of silk or wool. The symbols or monograms may be of appliqué work, or painted on the calico in distemper colours. The borders may be of ribbon or paint. The design in the centre of Plate II. shows the best shape for banners and the manner in which they should be suspended.

Crosses.—There are three kinds of crosses suitable for Christmas decoration, namely, those composed entirely of foliage and flowers, those of coloured grounds surrounded with evergreens, and those which are in colours without any evergreens. The last-named should never be of a large size. Floral crosses may be formed on wood, wire, or perforated zinc foundations. The crosses which have coloured grounds should be made of dressed timber painted in oil, or of card-board painted with distemper colour and secured to wooden stretchers. The evergreens may be attached to the wood-work or to independent frames of wood or wire, made to fit the outline of the crosses. The small crosses may be made of card-board or wood. These and the card-board ground are to be had, printed in gold and colours, from the publishers of this journal.

Diapers.—The diapers shown on Plate I. should be wrought on wire frames, the evergreens and rosettes being attached to them by thin string or fine tying-wire. The smaller drops in Fig. 10 are composed of holly-berries, threaded.

Medallions.—The outlines of all the medallions shown in our plates, and altogether of a similar nature, should be constructed of light timber, to which the holly or other leaves can be readily secured. The inner portions of the medallions may be constructed of timber, cardboard, or wire, as experience may direct.

Monograms.—The monograms shown in Figs. 6 and 7, Plate I., are best constructed on wooden foundations, with the evergreens attached in the usual way.

Scrolls and Texts.—The inscribed bands and scrolls which we have recommended to be used, may be made of a white calico stretched on light frames of wood, or of thin wood merely painted or covered with paper. The letters, cut from thin cardboard or paper, should be fastened to the bands or scrolls with glue. In preparing the letters for this purpose great distinctness and effect should be aimed at.

Shields.—Shields may either be of wood or stout cardboard, painted in oil or water colour. The gilded portions may be done in the proper way with gold leaf, or with bronze dusted on moist gold size ; but gold paper may be used for the cardboard shields, if neatly cut out and smoothly pasted on.

Stars.—Stars may be formed of wood or cardboard in the same manner as the shields above described.

A DISH OF NUTS.

By W. B. Lord, Royal Artillery.

AN autumn offering within the reach of rich and poor, and with which we shall find bound up whole hosts of home thoughts and pleasant memories, not the less dear from hanging garland-like round the Christmas-hearth of both the peasant and the prince.

The contents of our dish are known to all, being, in fact, every-day acquaintances, needing no formal introduction ; but yet, like many good and stanch old families, having scraps and jottings of historical lore, old verses, songs, superstitions, and quaint sayings, associated with them. Hazel-nuts, chest-

nuts, and walnuts, constitute our store; and as we crack or roast them familiarly with the reader, we purpose gathering together some of these and relating them. Whether clothed in bright spring garments decked with its silken catkins, or later on, when autumn has dyed the leaves of the forests and hedgerows, mingling the rich browns and yellows with the reds and sombre greens, the hazel, with its clustering cramps of ripening nuts, forms a charming feature in our English landscapes; and many towns, villages, and hamlets owe their names to the thickets of hazel-bushes at one time growing near them. Thus we have Hazelmere in Surrey, Hazelingfield in Cambridgeshire, and Hazelbury in Wiltshire; Hazelwoods, Hazeldales, and Hazelbrooks, are also common as names for farms and homesteads.

The word hazel is said to have been derived from the Anglo-Saxon *hæsil*, a head-dress; probably from the tough young shoots being interwoven for the purpose of making coverings for the head. Both the Greeks and Romans, in very early ages, appear to have been well acquainted with the peculiarities of this tree. It was said by Virgil to be considered by them injurious to their vines, from the far-spreading roots drawing off the richness of the soil. And as the goat was equally destructive, from its habit of browsing on the young vine-shoots, the vine-dressers adopted an effectual method by which the two evils might be disposed of at once. The goats were offered up as sacrifices to Bacchus, whilst the hazels were cut down to form spits on which the entrails were roasted. We are also informed that the common hazel-nut was called by the Romans *Nux Avellana*, from the town of Avellino in Naples; whilst the filbert was called *Nux Pontica*, from its having been brought from Pontus. The filbert appears to have derived its name from the *full beard* or long husk, distinguishing it from the other species, of which Loudon gives five. In many very ancient songs and ballads, both French and English, the hazel is lauded and spoken of with great affection and esteem. There appears also to have been a number of superstitions connected with the shrub, and marvellous qualities attributed to it. Evelyn, whose "Silva" is dated MDCLXXIX, thus writes of it:—

"The coals are used by painters to draw with; lastly, for riding-switches and *divinatory* rods for the detecting and finding out of minerals (at least, if that tradition be no imposture). It is very wonderful, by whatever occult nature the forked stick (so cut and skilfully held) becomes impregnated with those invisible steams and exhalations, as by its spontaneous bending from a horizontal posture to discover not only mines, subterraneous treasure, and springs of water, but criminals guilty of murder, &c., made out so solemnly, and the effects thereof, by the attestation of magistrates and divers other learned and credible persons (who have critically examined matters of fact), is certainly next to a miracle, and requires a strong faith."

The term Rhabdomancy has been applied to this supposed art of divination. Even to this day there are persons connected with mining in Cornwall who implicitly believe in the virtues of the *divining-rod*. Its use throughout the western counties of England is known as *Dowsing*. We have ourselves seen the dowsing-stick experimented with, but have never been fortunate enough to see any manifestation of the discovering powers attributed to it; and we are informed by a correspondent, in whom we have much faith, that within the last twenty years a "*diviner*," or water-seeker, travelled the "*West*," pursuing his art, and apparently not without success; but whether his then unquestioned discoveries of hidden springs were due to the exercise of his delicate senses, foreknowledge of locality, or to the mystical properties of the "*virgula divinatoria*," is a question open to the scientific to raise and settle if they can. The same notions regarding the rod appear to have prevailed extensively in Germany; and Sir Walter Scott, in his charming novel *The Antiquary*, most pleasantly introduces one of the Rhabdomancist experts in the person of Mein Herr Dousterswivel. Again, we read "The finding of gold which is under the earth, as of all other mines of metal, is almost miraculous. They cut up a ground hazel of a twelvemonth's growth, which divides above into a fork. Holding the one branch in the right hand and the other in the left, not held too slightly nor too strictly, when passing over a mine, or any other place where gold or silver is hidden, it will discover the same by bending down violently,—a common experiment in Germany, not proceeding from any incantation, but a natural sympathy, as iron is attracted by a loadstone." And now, pray listen to this, ye fond mammas who have grey-eyed little ones.

We find it gravely asserted that the ashes of the shells of hazel-nuts applied to the back of a child's head is a certain means by which the eyes can be turned from grey to black. An ancient herb-doctor thus writes of the hazel and its nuts:—

"Some doe hold that these nuts, and not wallnuts, with figs and rue, was Mithridates medicine, effectuall against poysons. The oyle of the nuts is effectuall for the same purposes. If a snake be stroke with a hazel wand, it doth sooner stunne it than with any other sticke, because it is so pliant that it will winde closer about it, so that being deprived of their motion they must need die with paine and want; and it is no hard matter in like manner to kill a mad dog that shall be strook with an hazel sticke such as men use to walk or ride withall."

The writer of an old English ballad gives the hazel wand credit for the possession of greater powers than even the doctor from whom we have just quoted. Possibly he wrote the result of his own experiences; we in no way indorse them.

"If a man has got a wife
Who's a torment to his life,
Let her taste a stick of hazel that is tough and strong.
In the wand there is a charm
That will work more good than harm,
For 'twill make a scolding woman hold her tongue."

Be this as it may, the sticks of the hazel are useful for an infinity of purposes—fishing-rods, walking-sticks, bird and vermin traps, hoops, and spigots. The framework of the gipsy's tent, and the clothes-pegs he sells from door to door, are of hazel. The chips were in old times highly esteemed as wine-cleansers, bundles of them being put to soak in the

wine-barrels. Quoting again from Evelyn, who lavishes praises on the hazel,—

"Even after all the most signal services it was ever employed in, and which might assuredly exalt this humble and common plant above all the trees of the wood, is that of hurdles.

"Not that it is generally used for folding our innocent sheep, an emblem of the Church, but for making the walls of one of the first Christian oratories in the world, and particularly in this island, that venerable and sacred fabric at Glastonbury founded by St. Joseph of Arimathea, which is storied to have been first composed but of a few small hazel rods interwoven about certain stakes driven into the ground; and walls of this kind, instead of laths and puncheons, superinduced with a coarse mortar made of loam and straw, doe to this day enclose divers humble cottages, sheds, and outhouses in the country, and it is strong and lasting for such purposes, whole or cleft; and I have seen ample enclosures of courts and gardens so secured."

In many parts of England it has been the custom to pass the long winter evenings away by engaging in various games in which nuts performed an important part; and the trial for a sweetheart by their aid was, to the young ladies of the party at any rate, an interesting and important ceremony; and thus was it conducted:—A basket or bag of nuts in their husks or *cramps* being produced, each young lady was called on to state how many lovers she had, not always an easy task, as the following lines from an old English song will show:—

"For so many lovers had Sue of the Vale,
That no cramp of nuts could give half of the tale;
So she grasp'd a good handful
To cast in the flame,
Crying, If you were fifty,
I'd roast you the same."

On the number being given, a cramp containing a corresponding number of nuts is drawn from the mass, and the name of one of the admirers being called, a nut is cast into the fire, the assembled party of divers into the future chanting in chorus,

"If you love me, rap and fly;
If you hate me, burn and die."

The boys usually engaged in a boisterous game of *cob nut*, which is played by boring holes in nuts and attaching them to a string, when they are let down one by one and their strength tested by striking them violently against other nuts similarly arranged; the challenge to combat being a sort of chant—

"Harry, Harry Hob-nut,
Lay down your cob-nut."

And when victory smiled on some nut of more than ordinarily thick shell, and the antagonist lay shattered on the cap or hat usually used as an arena for these battles of nuts, the kernel was at once eaten by the owner of the "*hard case*," who celebrated his triumph by the shrill imitation of the crowing of a cock—

"Cock-a-doodle-do!
Conqueror of two."

And so the season of frost and snow passed merrily in the old farms and country houses of the provinces. Vast quantities of both foreign and home-grown nuts are annually consumed in this country; France, Portugal, Spain, and other countries sending their quota. Perhaps of all the so-called *small* nuts imported, the description known as the "*Barcelonas*" are held in the highest repute. They do not actually come from Barcelona, but are despatched from the port of Tarragona. Mr. Inglis, in writing of this branch of trade before the alteration in the duty, and when two shillings per bushel was charged, says, "The annual average export of nuts from Tarragona is from 25,000 to 30,000 bags, of five bags to the ton, free on board at 17s. 6d. per bag."

The return retained by Government of nuts of this description sent from the various foreign ports at which they are shipped to this country, gives for the year 1864, 204,264 bushels.

In certain districts on the Continent, a very excellent oil, very little inferior to oil of almonds, is made from the kernels of hazel-nuts. A kind of chocolate has also been prepared from them, and during periods of scarcity a substitute for bread has been sought in the paste made from ground nuts. Why a nut-shell should be so generally used as a standard of comparison for confined spaces, it is hard to say, as some nuts are by no means small. "As much gold as you could put in a nut-shell," would represent a very substantial quantity; still the comparison, when applied to houses and rooms, is appropriate enough.

It is related of a rather *dilettante* A. D. C., that on returning from leave of absence, he thus addressed an old friend and companion in arms:—

"What, still in this wretched little nut-shell, my dear major? How long is this state of things to last? How much longer do you intend to vegetate here?"—"Probably, my dear fellow, until I actually become a *kernel*," replied the economical field-officer.

Much uncertainty exists as to the exact period at which the chestnut was first brought to England. It appears from all accounts probable that it was first brought to Europe from Asia Minor by the Greeks, about 504 B.C. Its name *castanea*, was no doubt, derived from Kastanea, a city in Pontus, in Asia. It appears also probable that the nuts were first sent to Rome in the reign of Tiberius Cæsar. Pliny, in speaking of the chestnut, gives eight kinds as known to the Romans. Perhaps the most ancient chestnut-tree we have any record of in this country, is that known as the Tortworth chestnut, which grew on an estate in Gloucestershire, belonging to Lord Ducie. A portrait of this tree was taken, and an etching was executed in the year 1772, beneath which the following inscription was placed:—

"The east view of the ancient chestnut-tree at Tortworth, in the county of Gloucester, which measures 19 yards in circumference, and is mentioned by Sir Robert Atkins, in his history of that county, as a famous tree in King John's time; and by Mr. Evelyn, in his 'Silva,' to have been so remarkable for its magnitude in the reign of King Stephen (1135), as then to be called the Great Chestnut of Tortworth, from which it may reasonably be presumed to have been standing before the Conquest (1066)."

Many of our old English poets and ballad writers have celebrated the qualities and convivial associa-

tions connected with the plump brown chestnut. Thus writes Herrick about it :—

> "Remember us in cups full crown'd,
> And let our city health go round,
> Quite through the young maids and the men,
> To the ninth number, if not ten;
> Until the fired chestnuts leap
> For joy, to see the fruits ye reap
> From the plump chalice and the cup
> That tempts till it be tossed up."

And the esteem in which it was held in Evelyn's day will be best shown by that which he writes about it :—

"We give that fruit to our swine in England which is amongst the delicacies of princes in other countries; and being of the larger nut, is a lusty and masculine food for rusticks at all times, and of better nourishment for husbandmen than cob and rusty bacon. Yea, or beans to boot. Instead of which, they boyl them in Italy with their bacon, and in Virgil's time they ate them with milk and cheese. The bread of the flour is exceedingly nutritive. 'Tis a robust food, and makes women well-complexioned, as I have read in a good author."

And mark well, all ye fashionable young ladies, what the worthy old gentleman goes on to say.

"A decoction of the rind of the tree tinctures hair of a golden colour, esteemed a beauty in some countries."

In France, considerable attention is paid to the preparation of the chestnut as an article of food, and no sooner do the cold, bleak winds of autumn and winter go sweeping through the broad thoroughfares of Paris, than whole *flocks* of the *hirondelles d'hiver*, or "winter swallows," as the roasted chestnuts are facetiously called by the Parisians, may be seen roasting on the charcoal-pans of their vendors, at every convenient corner.

Great attention is paid by the French to the selection of the particular kinds of nuts most esteemed for the table. The most notable of these is the kind known as *les marrons*, which are said to be to other chestnuts much what apples are to ordinary crabs. There are several other varieties less esteemed, but still important; such as the Limousin, which is chiefly noted for the size of its fruit, and the length of time the leaves remain on the trees. The wood chestnut, or *châtaigne de bois*, is mainly valuable for its luxuriant production of brushwood, nearly all the coppice woods in the vicinity of Paris being of this kind. Large quantities of the nuts are used in the neighbourhood of both Périgord and Limousin, for the manufacture of a peculiar kind of cake, known as *la galette*, of which the peasantry are particularly fond. A thick species of porridge is also prepared from the chestnut-meal, and is in pretty general use.

Chestnuts, when treated like ordinary beetroot, have produced 14 per cent. of sugar, a larger quantity than most samples of beet produce; and as the trees thrive and flourish where little else could be profitably grown, it is a matter of surprise that more attention is not paid to their cultivation.

Bosc says the chestnut-tree thrives well among rocks, where there is apparently very little soil, insinuating itself among the fissures and chinks, and attaining a large size. "Wherever," he goes on to say, "I have seen chestnut-trees—and I have seen them in a great many different localities—they were never in soils or on surfaces fit for the production of corn. On mountains in France, Switzerland, and Italy, the chestnut begins where the corn leaves off; and in climates suitable for corn, the tree is only found on rocky and flinty soils."

During our visit to the city of the ancient Karaite Jews, we were much interested at the extraordinary industry displayed by a colony of monks of the Greek church, who were engaged in excavating cavities amongst the tremendous cliffs bordering the valley in which their monastery was situated,* for the purpose of planting young chestnut-trees in; one man bearing the tree, two a large basket of earth, and a third a pot of water to refresh the roots of the young plant with; the whole operation being one of the most perfect examples of gardening under difficulties it has ever been our lot to see. Theophrastus informs us that in his day Mount Olympus was nearly covered with chestnut-trees. The great chestnut of Mount Etna, known as the Castagno di cento Cavalli, described by Houel, must have been a sort of giant amongst trees. It is, he says, one of the largest and oldest chestnuts in the world, and obtained its name from Jean of Arragon on her road from Spain to Naples. Having visited Mount Etna attended by her principal nobility, they were caught in a heavy shower of rain, when the queen and a hundred cavaliers took shelter under the branches of this tree, which completely covered and saved them from the storm. Mr. Loudon informs us that in 1770 this tree was still standing, although much decayed, and measured 204 feet in circumference.

The Neapolitans appear to have held high repute for their roasted chesnuts. Martial writes :—

> "For chestnuts roasted by a gentle heat,
> No city can the learnèd Naples beat."

Virgil appears to have had a thorough appreciation of the goodness of the chestnut, and its importance as an article of food. Thus he writes :—

> "Ripe apples and soft chestnuts have we there,
> And curd abundant, to supply our fare."

He speaks also of the mode by which the nuts were obtained from the trees in his time; and in this particular, at any rate, fashion has changed but little.

> "Myself will search our planted grounds at home
> For downy peaches and the glossy plum,
> And thrash the chestnuts in the neighbouring grove,
> Such as my Amaryllis used to love."

Milton, too, was not indifferent to the homely comfort of the cosy fireside and its winter accompaniments.

> "While hisses on my hearth the pulpy pear,
> And black'ning chestnuts start and crackle there."

The annual consumption of chestnuts in the

* The valley of Jehoshaphat.

United Kingdom is exceedingly large, as, in addition to those of home production, 125,659 bushels were imported in the year 1864.

Shakspeare, in "Macbeth," shows us the envy excited in the breast of the witch at the lapful of chestnuts held by the sailor's wife. Phillips says:—

"In Catalonia a custom prevails of people going from house to house on All Saints eve, believing that by every chestnut that they eat in a different house they will free a soul from Purgatory."

The period at which the walnut was first introduced in England appears to be uncertain. It is said to have been cultivated by the Romans before the death of the Emperor Tiberius, and is stated to have been brought from Greece by Vitellius. Strabo states that, at one time, in Rome, tables of walnut-wood sold at a higher price than those of citron. From a poem entitled *De Nuce*, written by Ovid, it appears that at marriages walnuts were thrown amongst the assembled children by the bride and bridegroom; and it has been suggested that ceremony was instituted to show that the bridegroom now cast aside his boyish amusements, or that the bride was no longer a votary of Diana.

"Now bar the door. The bridegroom puts
The eager boys to gather nuts."

It has also been suggested that the French term for nuptials *des Noces* might have been derived from this ancient custom.

We read that in 530, St. Médard, bishop of Noyon, instituted a festival, entitled *La Rosière*, at Salency, his birthplace, for adjudging annually the prize of a crown of roses to the girl who should be acknowledged by all her competitors to be the most amiable, modest, and dutiful in the village; and he had the pleasure of crowning his own sister as the first Rose Queen. It was also, it appears, an important part of the proceedings to formally present the newly-made Floral Queen with offerings of ripe walnuts and other fruits. We may judge from the following extract, that much importance was in Evelyn's day attached to the cultivation of the walnut-tree on the continent of Europe:—

"Burgundy abounds with them, where they stand in the midst of goodly wheat lands, at sixty and an hundred foot distance; and it is so far from hurting the crop, that they look on them as a great preserver, by keeping the ground warm; nor do the roots hinder the plow. Whenever they fell a tree (which is only the old and decayed) they always plant a young one near him; and in several places 'twixt Hanaw and Francfort, in Germany, no young farmer whatsoever is permitted to marry a wife till he bring proof that he hath planted and is a father of such a stated number of walnut-trees, as the law is inviolably observed to this day, for the extraordinary benefit which this tree affords the inhabitants."

The Government authorities in this country have, from time to time, caused large numbers of young walnut-trees to be planted in the neighbourhood of the various public works, in order that they might be made use of for gun-stocks, for which purpose the wood is peculiarly excellent. It appears, from a calculation made in 1806, that the manufactures of muskets in this country consumed annually 12,000 large trees.

And such was the panic caused in France by a disease having appeared amongst the walnut-trees, that, fearing a great scarcity of the timber, an act was passed in 1720, prohibiting its exportation under pain of confiscation and a fine of 3,000 livres. In these days of Volunteers and rifles, vast quantities of walnut timber are required to keep pace with the demand; and many foreign sources—the Black Sea and American ports amongst them—have been opened up for that purpose; and it is not probable that such a price as £600 will ever again in this kingdom be paid for one walnut-tree. This amount, we are informed, was once given.

Collinson, in his "History of Somersetshire," when speaking of the Glastonbury thorn, says:

"There grow also in the Abbey churchyard, on the south side of St. Joseph's Chapel, a marvellous walnut-tree, which never budded forth before the feast of St. Barnabas (tho 11th of June), and on that very day shot forth its leaves, and flourished like other trees of the same species."

He also informs us that this tree was much sought after by the credulous; and that Queen Anne, King James, and many of the nobility of the realm, even when times of monkish superstition had ceased, gave large sums of money for small cuttings.

There are several varieties of walnuts grown in different districts in England; amongst them may be mentioned the kind known as the "Highflyer," or Thetford nut; the fern-leaved; the thin-shelled, or titmouse walnut (so called from the shell being thin enough for the titmice to eat through it); and the huge *Nux Juglans fructu maximo*, known as the Warwickshire walnut. Many very charming little presents are ingeniously packed in the shells of these; and, if reports speak truly, they have often been the medium through which delicate kid gloves were transported free of duty. The purposes to which the wood of the walnut is applied are almost endless, and many of them are too well known to need comment.

In Tartary, and on some portions of the coast of southern Russia, it is a common practice to tap the walnut-trees for the purpose of obtaining the sap with a view to the manufacture of sugar. This is done much as the American settlers obtain their maple sugar. Holes are bored in the trees when the sap is rising. A convenient spout of bark is inserted, which carries the liquid as it flows into a pot or other vessel placed to receive it. This is afterwards boiled and crystallized roughly for use. Many of the trees which we examined on the southern Russian coasts had been thus treated. Wine is made also from the juice by subjecting it to fermentation, whilst by distillation a strong spirit is obtained. Perhaps the largest walnut-trees in the world are to be found in Crim Tartary. Large quantities of oil are obtained from the kernels of walnuts, and, in a commercial point of view, its obtainment is more important than any of the other purposes to which the nut is applied in the districts in which it is grown. When the proper

season arrives, large convivial parties are assembled, much after the manner of the corn-huskings, candy-pullings, and apple-peelings of the United States of America, for the purpose of cracking the nuts before pressing. This is effected by the use of small light mallets, which some of the party use whilst others remove the kernels from the broken shells and place them unpeeled in baskets. Either horse or water power is usually made use of for grinding the nuts to a paste, which, when sufficiently fine, is placed in strong coarse bags, and subjected to heavy pressure. The first runnings of oil, known as the *cold-drawn*, are esteemed the best. The paste, after having the oil pressed from it, is used as food for pigs, sheep, and poultry; and in some localities a rough kind of candle is made from it. Dark-brown and black dyes are made from both the root and husk. Would-be gipsies and strollers have from very early ages availed themselves of the colouring juices of the walnut for the purpose of staining the faces and hands of newly-elected members or such poor stray children as evil fortune might cast in their way and enable them to kidnap. Referring to this custom, we receive advice in verse, with a reason for following it :—

"Go, stain your cheek with nut or berry,
For the gipsy's life is merry."

Although the quantity of walnuts grown in the United Kingdom is very large when compared with the other kinds contained in our dish, the number imported will serve to show how extensive and general this consumption must be. In the year 1864 we find 125,659 bushels the quantity received from the various ports from which they are usually sent. The estimation in which the walnut was held in Cowley's time will be best shown by quoting that which he has written about it :—

"The walnut then approach'd, more large and tall;
Her fruit, which we a nut, the gods an acorn call—
Jove's acorn, which does no small praise confess,
T 've call'd it man's ambrosia had been less.
Nor can this bead-like nut, shaped like the brain
Within, be said that form by change to gain,
As caryon call'd by learned Grecks in vain,
For membranes soft as silk her kernel bind,
Whereof the inmost is the tenderest kind,
Like those which on the brain of man we find;
All which are in a seam-join'd shell enclosed,
Which of this brain the skull may be supposed.
This very skull enveloped is again
In a green coat, her pericranium.
Lastly, that no objection may remain
To thwart her near alliance with the brain,
She nourishes the hair; rememb'ring how
Herself deform'd without her leaves does show,
On barren scalps she makes fresh humours grow.
Her timber is for various uses good,
The carver she supplies with useful wood;
She makes the painter's fading colours last;
A table she affords us, and repast—
E'en while we feast, her oil our lamp supplies;
The rankest poison by her virtue dies—
The mad dog's foam and taint of raging skies.
The Pontic king, who lived where poisons grew,
Skilful in antidotes, her virtues knew.
Yet envious fates, that still with merit strive,
And man ungrateful, from the orchard drive
This sovereign plant. Exeluded from the field,
Unless some useless nook a station yield,
Defenceless in the common road she stands,
Exposed to restless war of vulgar hands,
By neighbouring clowns and passing rabble torn,
Batter'd with stones by boys and left forlorn."

It has long been a prevailing notion that walnut-trees were benefited by having their branches beaten by the long heavy poles (often iron-shod) used for knocking down the nuts. And some cross-grained old curmudgeon has thus written regarding the practice :—

"A woman, a dog, and a walnut-tree,
The more you beat them the better they be."

It is devoutly to be hoped, if there is any truth in the doctrine of metempsychosis, that sometimes a little latitude is allowed, and plants as well as animals permitted to become the abiding-places of lost spirits; in that case we should expect to find the aforesaid "*curmudgeon*" safely bound up in the bark of some fruitful and well-thrashed walnut-tree.

GRAPHOTYPE.

SEVERAL months ago, in one of those columns of the press which, for a consideration, are quite impartially open to the most legitimate appeals for co-operation, and to the victim-traps of the financial depredators, there appeared the announcement of the "Graphotyping Company, Limited." It was emphatically "a bad time for a new company," and many an old concern has had a *mauvais quart d'heure* since then : yet this one, we are told, has contrived not merely to hold its own through the financial hurricane, but to progress fairly toward realizing the hopes of its founders. We are glad of this, for we look upon Graphotypy as a discovery and practice which will be presently recognized to have an important bearing upon fine arts, manufactures, amusement, and education.

Our object not being to write a pamphlet, but to condense as many facts as possible into one or two pages, we will not travel into an account of wood-engraving from its supposed birth in the 10th century to the present time. We assume the reader's knowledge that the subject of a wood-cut is first drawn by one artist in pencil, ink, or colour, upon a block of box-wood, and then that the spaces between the lines are cleanly cut away by the "wood-engraver," who, to be successful, must himself be an artist. From the block so prepared, or from stereotypes cast in moulds taken from it, are printed the impressions with which all are familiar. The quality of the cut that delights us in the high class Christmas-books, and in the weekly papers of our time, or offends in publications of a low grade,

depends upon the taste and skill of the original draughtsman, and the dexterity and appreciation of the engraver, as well as, to some extent also, upon the good management of the printer. The process is in all classes of work the same, different as the results may be; and under the hands of many eminent designers and engravers since the days of John Bewick, to whom we owe its revival in this country, it has been brought to such perfection and cheapness that wood engravings have for many years been almost indispensable adjuncts alike to the most luxurious and to the meanest of publications.

It was reserved for an American draughtsman, Mr. De Witt Clinton Hitchcock, to discover very unpremeditatedly that the lines of a drawing made with silicating ink upon a surface of chalk would absolutely resist ordinary friction, while their interstices could be removed by a brush of delicate hair, or a rubber of velvet, leaving in bold relief a type or block, which could either be "printed from direct," or used as a mould for stereotype.

The story of the discovery as told by the inventor's able brother artist and representative, Mr. Henry Fitzcook, is not, in our opinion, to be condensed or improved upon: so we take leave to adopt it:—

"In the summer of 1860, whilst engaged in the pursuit of his art, the discovery was made in the following manner:—In the course of making a drawing on box-wood, he found it necessary to alter a portion of his design by erasing it and re-whitening the exposed surface of the wood. The material used for this purpose was the enamelled surface of an ordinary visiting card, softened by water and a brush, a method known to most draughtsmen on wood. This card happened to be one printed from a copper plate, and after the removal of all the enamelling, as described, the artist discovered that the printed letters were undisturbed, and standing up in a bold relief.

"Mr. Hitchcock undoubtedly was not the first or only draughtsman who had used a card in this way or with the same result: but it must be conceded that he was the only one who perceived in this mutilated visiting card the basis of a mode of producing a relief printing-plate: without the skill of the engraver, and who proceeded to experiment thereon.

"The first trial was upon a piece of chalk one inch in thickness, sawn from the ordinary lump, and smoothly surfaced by scraping. The ink used was silicate of potash, commonly termed liquid glass, coloured with indigo; with this and a quill pen, a drawing four by six inches was made.

"The inventor well knew that the application of water to his chalk block would undermine the lines, and consequently destroy the drawing; he, therefore, departed from the method used with the visiting card, and, with the aid of a tooth-brush, pulverised or disentegrated the surface of the chalk not immediately drawn upon.

"The lines of the drawing being literally composed of stone, withstood the assault of the tooth-brush, but the intervening particles of exposed chalk succumbed, and vanished in a cloud of snowy dust, leaving the impregnable lines standing in relief, inviting a proof of their strength by printing on paper. This could not be done until the whole mass of chalk was changed into stone, by saturating it with the liquid glass, and in half-an-hour the chalk engraving or block was inked and printed in the ordinary way, on paper by burnishing.

"Sawing and surfacing the chalk block, preparing the ink, making the drawing (quite an elaborate one), brushing it into relief, petrifying the block, and printing therefrom, occupied only four hours—four happy hours for the inventor.

"The new process now needed a name. It was a living act, but the dead languages must be exhumed for its appellation. It was christened Graphotype, literally signifying a type made immediately from a drawing.

"Prior to a second experiment it was thought necessary to use a substance of a finer and more uniform quality of grain than common lump chalk, so a cake of French white powder, used by ladies for improving their complexions, was obtained, and the result was highly satisfactory. The fact that these cakes of white beautifying powder were compactly formed by hydraulic pressure suggested a valuable improvement to the process."

It will be gathered from the above passage, which gives but a faint idea of an inventor's labours and anxieties, that although Mr. Hitchcock literally "stumbled," as his exponent says, "over this notion," he grasped its wide scope, and its importance to the public (peradventure to himself also) with the acumen characteristic of his countrymen, and with their native vigour reduced it to practice. The details of the process were not matured, as may be imagined, without study; for our reader must not assume that *any* so-called silicating ink, or *any* piece of chalk, will answer the purpose of the graphotyper, or that art and technical skill were not called into requisition at every step. Still, in the fulness of time, the Graphotype was brought to the notice of the Society of Arts. According to the custom of that body, Mr. Fitzcook was permitted to read a memoir before it, on the 6th of December, 1865; and to submit the invention to the scrutiny of a haphazard tribunal, comprising, probably, true experts, representatives of old or new rival interests, ignoramuses, and crotcheteers in general. The verdict was favourable: indeed, it could hardly be otherwise. For the inventors were there at work with their frames of indurated chalk, their tiny hair pencils, their silicating ink, and their spacing-brushes and rubbers, in lieu of boxwood blocks, lead pencils, tinters, and gravers. One man at the Graphotype was doing two men's work at wood engraving, and in a tenth part of the time. The press was at hand to prove the tale, and the minor technical objections—so often fatal—having been satisfactorily disposed off, the Society of Arts was pleased to acquiesce in the "inexorable logic of facts," and to pronounce success successful.

Fortified by the verdicts of the Society and the press, and by the experiments of a crowd of approving artists, the Company wisely associated itself with some practical men, and embarked at once in business, offering to execute work for all comers. As, under favourable conditions, the managers can turn out a stereotyped block ready for the printing-press, in less than two hours after receipt of a finished drawing on the chalk block; and as they charge one half the price of a wood engraving (the drawing being found in both instances), there is no room to doubt that a demand must be forthcoming from the publishers of cheap books and periodicals, irrespective of all artistic considerations. But it remains for time to disclose whether the new art will ever vie with wood engraving of the highest class. Some of the published specimens favour the presumption that such may be the case; from others, adverse conclu-

sions might certainly have been drawn. We are glad to illustrate our pages with one from the accomplished pencil of Mr. John Gilbert, who, after a long and successful career as a designer on wood, lends the weight of his authority most unequivocally to the new material. The list of contributing artists to a new edition of Watts's "Divine and Moral Songs" comprises the names of Holman Hunt, Cave Thomas, Du Maurier, Hablot Browne,

Marcus Stone, T. Morten, J. D. Watson, H. Anelay, Florence Claxton, C. Green, M. E. Edwards, and D. C. Hitchcock.

Mr. Noel Humphreys and Mr. Fitzcook, both practical men, were bold enough severally to declare before the Society of Arts, that properly trained artists would find no difficulty in drawing the finest lines on chalk surface with a brush as fine as is now habitually used upon smooth stone by lithographers, and that those who apprehended difficulty, only did so because they had not tried. The amiable George Cruikshank, again, thought that had the Graphotype existed in his young days, he would now have been riding "in a coach and six, instead of in an omnibus." Still, notwithstanding the satisfactory results, and the strong body of adherents which the cause has attained, some few years may elapse before the school of competent draughtsmen now in course of formation has developed fully the capabilities of the art for book illustration. Time, again, and probably the work of many an ingenious brain, will show how best to adapt it to the uses of the potter, the embosser, the pattern-maker, the calico-printer, and the thousand other artificers who have an interest in the cheap and expeditious multiplication of artistic designs.

Mr. Holman Hunt himself was, we apprehend, to a certain extent, of our opinion, when he wrote the following passage, no less valuable to the invention as a testimonial in its favour than as a caution against going too fast :—

"I regard the process of drawing for book illustrations, called Graphotype, with which 'Watts's Hymns' have

been illustrated, to be the best yet adopted. The merit of the modern wood-cutters is very great, and the care which they bestow upon the blocks they cut deserves, oftentimes, the greatest thanks of the designer of the work; but, even under the most favourable treatment by the cutter, much of the original character of the drawing must necessarily be lost. Your new invention will preserve every peculiarity of style. A first experiment is scarcely a fair test of the capability of the process, but it has convinced me that when the tools are familiar to the draughtsman he will find a means of expressing his ideas which he never had before except in etching on metal, which of course cannot be used in type printing."

That a revolutionary invention should pass through a certain period of minority is satisfactory, as withdrawing from calculation the evils attendant upon large and sudden convulsions in the labour market; and we confess we should regard the Graphotype with less complacency could we believe that it would paralyze the profession of the designer on wood, or annihilate that of the wood-engraver. Should a revolution come, its march cannot be so rapid as to leave no time for preparation by those who, from previous training, will have so little need of it. The art cannot extemporize its professors; and the industries in question may, at small pains, be ready to welcome it. If they refuse to see the signal of change the fault will be their own. Under either flag they may be safe if they please, and we are glad to think there is no place for the conservative objection we might otherwise have founded upon *tendresse* for an old interest in danger of being swept away.

And, while we counsel the instant study of the Graphotype and its capabilities to those whom it may chance materially to concern, we must particularly commend this gentlest of arts to that interesting and growing fraternity, the amateur Etchers. In a recent number of the "Fine Arts Quarterly Review," an enthusiastic writer "About etching," told us, epigrammatically and truly enough, that the etcher's needle was to the engraver's burin "as a pen to a plough." He illustrated in poetical and forcible terms the superiority of the "point" in "suppleness, liberty, rapidity, and directness of utterance;" "in mobility, in independence," and in "mental properties." Adopting and carrying farther his metaphor, we are bold enough to say that in every property which may enable an artist to record felicitously his impressions of nature the Graphotyper's pencil must bear away the palm; while, in the commonplace particulars of convenience and manageability, there can be no comparison between the processes. We cannot conceive that any such "poet painter," as is referred to by our contemporary, if his object be conscientiously and without unnecessary labour to attain the qualities above set forth, will, after a trial of the Graphotype, ever again resort to the cumbrous paraphernalia of the etcher. Whoso would save himself pounds of burden and crowns in money, besides enjoying the satisfaction of seeing the continuous progress of his plate instead of working in darkness and uncertainty as to result, must surely, ere long, prepare to abandon the copper-plate with its fussy array of bottle and bath, varnish and mordant, in favour of the hair pencil, the chalk, and the rubber of the Graphotype.

MORSELS SAVED FROM MOTH AND MOUSE; OR, GLIMPSES OF NATURAL HISTORY IN THE DARK AGES.

By Greville Fennell (Barnes).

As there are nations and individuals who look upon a piece of printed paper as a sacred emblem of literature, and spare it in consequence, so have we, whenever we have met with typical worth thereon, considered that the scrap which gave us pleasure might afford delight to others; and it has, consequently, escaped destruction. We have recently been sorting some of these jottings and cuttings under heads, and as our natal month claims for its zodiacal sign—the Pisces, it is but natural a preference should be given to the musty bits that apply to fishes, some of them being from books and manuscripts, which we are inclined to believe are now extremely scarce, or have almost ceased to exist. But let us dip at once, after the fashion of an extempore and petite lottery, into our budget of literary tickets, and take what comes first. "There are stingrays, which carry a dangerous sting in their tails. Captain Smith," says Harris, "was stung by one of them. The effect was a violent swelling and a tormenting pain, but was cured by a good chirurgeon, and the sick man, that was like to die in the morning, was able to make a supper of it in the evening: for they are good meat."

Doubtless the piquancy of the meal was not a little increased by the captain's knowledge that he was eating his enemy.

The effects of electricity upon fish are well known, although but little is understood at present thereon. The Tench suffers extremely from thunderstorms, and in Norfolk, where large quantities are taken and "trunked," the fishermen often endure great loss from this cause; yet the consequences are very partial in their character, one trunkful of tench being killed on the same "Broad,"—as the lakes or lagoons attached to the rivers are technically termed,—while others wholly escaped. We learn by an article in the *Quarterly Review* for January, 1822, upon Dobrizhoffer's "History of the Abipones," that in tropical climates hail and thunderstorms together sometimes depopulate rivers. In *Fotherby's* "Voyage near Greenland," lat. 78°, "they saw a light upon the Fore-bonnet, which the sailors

call a Corpo-Santo ; it appeared like the flame of a candle, and (as seamen observe) always presages a storm. It was foul weather all that day, and was so vehement the night following, that the sea ofttimes over-raked the ship." "When great fishes appear in great numbers, leaping about a ship, it presages a storm : some call it playing ; but I imagine," says the philosophical author, "that this motion proceeds from some pain or other they are afflicted with against bad weather."

"The greatest enemy of mankind is man," is an old axiom. It is well, then, that he possesses some friends amongst the brute creation, as the dog, and, may we add, the horse. And it would seem that he is not destitute of those who love him amongst the fish, for we learn from Sir Thomes Herbert, that, while he was on the coast of Sanquebar,—a large kingdom on the east side of the Cape of Good Hope,—he saw there great numbers of dolphins, of which he says, "they much affect the company of men, and are nourished like men ; they are always constant to their mates, generate by sperm, embrace, join, and go with young ten months ; so tenderly affected to their parents, that, when they are three hundred years old, they feed and defend them against hungry fishes ; and when they die carry them ashore and bury them." We are not told how they contrive to perform the funeral ceremony ; for another writer (Dr. Grew) describes the dolphin as of about two yards and a half long. "His tail is expanded in a peculiar way, not uprightly, as in other fishes, but horizontally ; by the help of which he makes his gamboles above the water, and at the same time takes his breath. By this form (*sic*) being pretty large, he casts himself forward, and is said to exceed all other fishes in swiftness." Granted that he can "gambole" and "cast himself forward," when half-seas over, this would be far from a decorous movement ashore, in which to indulge while attending the funeral of his grandmother. But *Pliny* would have us believe that the dolphin is capable of undertaking even stranger feats, for he, and others, relate a story of one of these fishes which frequented the Lake of Lucrin :—

"A boy that went every day to school from Baia to Puzzoli, used to feed this dolphin with bread, who became at last so familiar with the boy, that he carried him often on his back over the bay." *Appian* says he was an eye-witness of the act, "besides many more that flocked from all parts to see it ; and *Solin* affirms that at last it was so common that it was scarce any more regarded as an extraordinary thing."

This "going a wooing" by a Dolphin naturally directs us to the Frog. We are assured in black-letter that, although he is well known, his virtues physically are comparatively little understood. But "all parts of him are good and profitable for mankind. The heart," *Arnoldus* has it, in *lib.* 4, *Breu.*, "is especially so." One who was troubled with a dire complaint was perfectly cured by swallowing, four or five mornings, the hearts of frogs. "The lungs of frogs are a preservative against the falling sickness, and so is the liver," as *Timotheus* relates. "The liver dried and mixed with honey, applied to the toothache, is a perfect cure," as *Nicander* hath it. *Wecherus* testifies, "the same beaten to powder and drunk, is good against a quartane ague" (*lib.* 2, *Antidot. speci.*). "The gall," as Pliny hath it, "dissolved in honey, cures the flux." "The blood is good against growing of hairs,—their fat dropt into the ears cures deafness,—the spawn or sperm of them put into a linen cloth and applied to the hemroides is excellent," as *Gallius*, in his *Basilica Chymica*, asserts. "The same kills the itch of the hands, and redness of the face, and is good against any burnings," as *Quercetan* testifies (*lib. Pharmac.*), "taken in March." "All these are known for truths," for doth not Aldrovandus, that famous author, tell us as much in his History of Quadrupeds, *lib.* 1, page 60 ? "The troublesome unpleasant noise of frogs in the night will cease if you set a candle burning on the bank-side nigh the water where they be, or else many lights, according to the greatness of the place where they be." We quote the latter fact on the authority of *Africanus Geopont*, and if nothing else, it serves to show that frogs, albeit considered powerful for good in dark ages, dread the light. Would that the croaking of some other animals could be as effectually stayed by enlightenment.

We must leave the operations of the Frogs, and hop back into the water amongst our friends the fishes. Let us not, however, in gallantry pass over what we have gleaned of "women-fishes."

"In some lakes of Angola is frequently seen the creature called *Pesiengoni* by the natives, by the English *Syrens*, because, when taken, they fetch many sighs and mourn like a woman, and are something like in shape. [The Syrenic pun is not ours, but of an age to know better.] There is a hand of this creature at Leyden." Similar fish-women, or women-fish, are recorded by *Collier*, whom it may be enough to quote, although the scientific may refer to *Atlas*, 1740, are closely allied in many respects to "God's chief work." "The Spaniards," says *Collier*, "call them *Juguete de agua*, and the natives *Axolotl*. And it was likewise pronounced as a fact in natural history, that Manilla possessed these women-fish in great numbers, they being so called because they had breasts like a woman."

But to descend from Venus amongst fishes, only, it may be, to behold her again in the heavens, let us dilate from the lower ooze of the sea upon the "Star-gazer." *Rondeletius* is particularly anxious that we should believe his story, and few of our readers will not fail to recognize our friend under his old name. "This fish [the Star-gazer] hath a slender membraneous string in his mouth, which he projects and draws in at pleasure, as a serpent does his tongue : with this he decoys little fishes, and then preys upon them. For, plunging himself in mud," &c. &c.

If Nature and Art has any alderman amongst its readers, we beg the following mouth-watering account of a turtle may be omitted, as in the case

of the recent agitation of a fear that our supply of coals would be soon exhausted, as the world was being rapidly scuttled, our city friends may opine that the decadence in the size and weight of turtle during the last two hundred years may fairly argue a time fast approaching when calipash and calipee will be no longer seen in "big bits" of green fat. "In the island of Cuba (*temp.* 1602), they,—the turtle, are so large that they will creep along with five men upon their backs: they squirt the water out at their nostrils, as the dolphin does at his spout. Men take them by turning them upon their backs with staves, from which posture they cannot rise; and as they lie, they sometimes fetch deep sighs, and shed abundance of tears. They are excellent good meat, and are sometimes big enough to dine fourscore men."

It is almost a pity to spoil the poetic sentiment of "the sighs and the tears;" but in the attempt to get breath in such an apoplectic position, any creature with so little neck would gasp and be suffocated by water, or, prosaically speaking, be drowned. The assurance that "they are excellent good meat," protects us, however, against any fear that we, by disturbing the pathos of our ancient author, shall annoy his shade.

THE RESOURCES, PRODUCTS, AND INDUSTRIAL HISTORY OF BIRMINGHAM, AND THE MIDLAND HARDWARE DISTRICT.

IF the British Association should ever be in want of testimony to the benefit which it confers upon the country by holding its annual meetings in different provincial towns, it may point to the reports lately edited under the above title by Mr. Samuel Timmins (than whom no more zealous or accomplished authority could well have been selected), in proof of the wholesome stimulus which the Association applies to the minds of men apt to pursue trade and trade improvements too eagerly to waste a thought upon the mere chronicling of the events connected with their several manufactures and products.

In this work of more than 700 pages, containing information respecting the coal and iron of Staffordshire, the glass and alkalis and soap of Smethwick, and the metal-works of Birmingham, including its cheapest toys, its costliest plate, and all kinds of engines and machinery, we have a highly valuable collection of facts, furnished us by men who, in their several departments, have had special opportunities of knowledge, and who, if not gifted with great literary skill, must yet be admitted to have described what they have had to tell us with considerable ability and perspicacity. Peculiarly interested as we are in Art manufactures, we have of course perused with most care the portions of this book which relate to these productions, and are glad to note admissions made here and there that Birmingham has yet much to learn in this respect. For instance, in summing up the particulars of the lock-trade—one of the most flourishing in the district—the writer acknowledges that there has been little or no improvement made during the last twenty years in Birmingham locks, which might be fashioned "with more symmetry and beauty, without in any way destroying their more practical qualities." So also we note that the writer upon japanning admits his "doubt if any great progress has been made in the trade in an artistic direction, although we no longer see Abraham in red sacrificing Isaac in blue upon a green altar with a black background." He tells us that all colour is now eschewed for japan ornament, excepting one, and that is "the hue of the metal which subdues the world"—meant to be an elegant periphrase hinting that "gold hath the sway" at present; a statement which is followed by a mysterious sentence that "one whose name in matters of art is just now much before the public" has announced that "colours are coming in again," and we may consequently expect that "the flat and insipid will soon give place to Tyrian dyes and hues that emulate the rose." This rather glowing paper ends with a statement that among japanners "a little more education is desirable; for a man to excel in his art *he should know something* of perspective and more of colour." But Birmingham artists in japanning can not be covetous of large pay, and yet they must be very expeditious; for we are shown, in a statistical account of them, that their wages average only 30s. a week, although "a skilled artist can paint with ease two gross of small landscapes per day."

In our necessarily rapid summary of the contents of this work, we are obliged to omit mention of many excellent articles on various subjects, several of which, if they were treated at large, would each suffice for a volume. We will advert to but three or four of the most prominent.

In a paper on the Ribbon and Watch Trade of Coventry, we have a distinct assertion that the late distress of the ribbon-weavers was due less to the commercial treaty then just concluded with France, than to an unsound system of labour-payment and to the caprice of fashion. "Foreign competition, or rather the terror of foreign competition, may have somewhat hastened the crisis, but the crisis itself was inevitable, and would have been equally disastrous had the French treaty never been concluded. On the other hand, while the direct competition of the produce of French looms can hardly be said to be felt by the Coventry manufacturer, the indirect competition produced by abolishing the restrictions on trade has undoubtedly been the mainspring of the renewal of prosperity on a sounder and more enduring basis." The writer is not, however, satisfied that the attempt to introduce the manufacture of cotton goods into Coventry has been proved as yet to be successful.

There have occasionally arisen strange rumours as to the kind of goods Birmingham sometimes exports to uncivilized countries; heathen gods, themselves, as some have asserted, have been provided "to order." Scarcely less strange is the trade described in this book as being carried on with some princes of Africa in specially-designed brass coffins, with plates of glass inserted, in order, as the Birmingham reporter poetically writes, "to enable friends to survey the ravages of the destroyer on the visage of the silent tenant;" or the curious exportation of brass wire to the Gold Coast, sometimes to the extent of twenty tons at one order, for use by the natives of that country as money, or, in Birmingham euphuism, "as the circulating medium." Another of its annual exports to Africa is about 100,000 to 150,000 of those flint muskets—"park-palings" they used derisively to be called on account of their quality—with stocks stained to order, black, brown, red, and vermilion—the African being fond of "standing on the old paths" in the choice of his guns, rather than to accept the results of modern scientific discovery.

The particulars respecting the manufacture of Birmingham jewellery and the cheap imitations of such valuables is extremely interesting, and perhaps also the most carefully described in the volume. We have not room, however, to enter upon them here, nor to refer to the papers on electro-plating, bronze-casting, glass-painting, coining, steel-pen making, bells, and other manufactures. It must suffice that we pronounce the work to be an extremely important one, and to commend it to general perusal. Yet it is but a fragment—an imperfect fragment—of the industrial history of this country, which yet remains to be written.

THE FIRST CHRISTMAS CAROL

THE Country folk with eager eyes,
The stable door came flocking round;
And "Shepherds, there," they cried, "He lies
And there the Babe ye seek is found:
At Cæsar's call, from south to north,
Our tribe is told in Bethlehem:
And priest and Levite thrust them forth,—
The ox's stall was meet for them."

The shepherds came—a simple crew,
In rustic order bent they there;
And still the shepherd pipes they blew,
And sang betimes a solemn air:
They bent, they gazed, "to God the praise:"
They rose, and hymn'd their hymn again;
It seem'd a strain of elder days,
When God vouchsafed to walk with men.

And then they told how late at night,
By David's Well they watch'd their fold;
The vale was wall'd to left and right,
And screen'd their huddling sheep from cold.
God's angel stoop'd in bright array,
"Fear not," he said. "but shout and sing;
To you, in David's town, this day
Is born a Saviour, Christ the King.

"And this shall be the sign: ye'll find
The Babe within a manger laid."
Then sudden o'er the angel shines
The heavenly host: on harps they play'd.
And, while he mounted in their light,
From sky to earth the chorus ran,
"Glory to God in highest height,
Peace upon earth, good-will to man."

Such was the tale, and "poor our skill,"
They said, "but God hath tuned the song,
And henceforth still, o'er dale and hill,
Our humble pipes to God belong:
And 'Christ is born!' we'll shout amain,
'Glory to God in highest height:'
So carol we that angel strain,
Yearly to greet thee, blessed night."

They marvell'd at the shepherds' tale,
The people thronging to and fro;
"The stated seasons never fail,
The years draw nigh," they whisper'd low:
And seers before the manger stepp'd
And hail'd Him—"Lord and King thou art."
But all these sayings Mary kept,
And mused upon them in her heart.

Oh! Mary, mother, meek and mild,
Thy faith has need of strengthening now:
Gaze long upon thy sleeping Child,
For blood shall burn that placid brow.
Those lips shall writhe in agony,
And shriek the sinless soul away;
And yet thy faith must moveless be,
And learn to bless His torment day.

Oh! Virgin Mother, Spouse of God!
Along the burning path of dread
Thy woman's feet shall pass unshod—
This hour shall stay thy sinking head.
And oft when winter nights are long,
And all thy heart with watching worn,
Again shall burst that angel song,
Blessed of women, "Christ is born!"

M. F. D. Ward.

THE PALACE OF THE CÆSARS.

THE celebrated gardens of the Farnese palace, which belonged to the ex-king of Naples, were purchased of Francis II. by the Emperor Louis Napoleon, and the latter has prepared the materials of a highly-interesting chapter in his "Life of Julius Cæsar" by placing them in the hands of the Chevalier Pietro Rosa, a learned Roman archæologist. Excavations were commenced in 1861, with the object, as given in the Chevalier's own words, of bringing to light, for the advantage of science, all that remains on that spot belonging either to the earliest epoch of the eternal city, of which the Palatine Mount was the cradle, or to the later times of the republic and the empire, whose magnificent edifices covered nearly its whole surface. The labours of M. Rosa, described partly by himself, and partly by Dr. Henzen, in the "Bulletin of the Archæological Institute of Rome," have resulted in important discoveries and highly-interesting hypotheses, which cannot fail to be deeply interesting to the learned world. Those discoveries refer to three distinct objects — the primitive form of Mount Palatine; the public and private buildings erected in the time of the Cæsars; and the monuments of a still older period on the ruins of which they were raised.

M. Rosa's first task was to clear away the superincumbent soil of the gardens, and lay bare the ruins below; and, after much research, he believes that he has made a discovery of great importance, and which will go far towards explaining what has before seemed obscure in ancient accounts. The discovery, or hypothesis, is this—that the surface of Mount Palatine, which has been heretofore represented as a trapezium, was formerly, like the Capitoline Hill, intersected by a hollow, or *Intermontium*, dividing it into two plateaux of unequal size. Of these the western was the *Cermalus*, and the smaller one, a mere appendage, which stretched towards the Esquiline and separated the two valleys of the Forum and the Flavian Amphitheatre, the *Velia*. M. Rosa declares that there is no doubt whatever of the original existence of these two heads of the Mount, for he has laid bare, beneath the palace of the Cæsars itself, the under-ground constructions which filled up the original hollow, and furnished an artificial foundation for later erections.

This discovery has led to the following important deductions. It is known, from the evidence of Solimus, that the *Porta vetus Palatii*, or *Porta Mugionia*, one of the gates of the old *square* city, constructed by Romulus, was situated at the culminating point of the *Via Nova* (*supra summam Novam Viam*); and as Festus tells us that the *Via Nova*, which branched off from the *Via Sacra*, at the place where the Arch of Titus was afterwards erected, and reached the banks of the Tiber by passing between the *Velabrum* and Mount Aventine, it is evident, he thinks, that the *Via Nova* must have followed the *Intermontium*, or hollow (which, it will be seen by the plan annexed, gives very nearly a square form to the *Cermalus*), in order to have reached the other side of the Palatine Mount, and thence the "lowest" point, where it abutted on the Tiber. This being the case, it was only necessary to excavate from the Arch of Titus, in the direction of the *Intermontium*, in order to discover the foundation of the ancient way; and the point on this line where the remains of the *Porta Mugionia* might be found, would be at once the summit of the *Via Nova* and the point of departure of its prolongation across the *Intermontium*. This being done, the situation of the house of Ancus Martius, which, according to Varro, stood on the left of the *Via Nova*, near the gate *Mugionia* (*ad portam Mugioniam secundum Viam sub sinistrâ*), would be determined. Two lines of Ovid—

> "Inde petens dextram, porta est
> Augusta palatî.
> "Hic Stator, hoc primùm condita
> Roma loco est."
> (*Trist.*, *Book II.*)

directed M. Rosa's researches to this spot where he was sure to find the vestiges of the Temple of Jupiter Stator; and as the heights of the Velia rose before him to the left of the *Intermontium*, the position of the house of Tullius Hostilius and of the Temple of the Penates, as described by Solimus (*Tullus Hostilius habitavit in Veliâ, ubi posteà Deûm Penatium ædes facta est*), was clearly indicated; he was also enabled to fix the place of the house of Tarquin, whose windows, says Titus Livius, looked upon the *Via Nova*, near the *Porta Mugionia*, and the temple of Jupiter Stator. At the same time he was enabled to solve the much-vexed question touching the direction of the *Via Nova*, raised probably by the text of Ovid, who made it pass by the *Velabrum* and thus contradicted the words of Festus cited above. The dates clear up the discrepancy: the *Intermontium* being closed over in time by buildings, the direction of the *Via Nova* was altered, and passed round the hill by the *Velabrum* to the *Circus Maximus*. The discovery of the *Intermontium*, moreover, enables M. Rosa to determine, as he believes, the perimeter of the ancient *square* city of Rome, founded, as the legends say, by Romulus. The famous wall, whose place was traced by the plough of the royal shepherd, *per ima Montis Palatini*, as Tacitus says, and the *pomœrium*, or boulevard, of ancient Rome, which Aulus Gellius says was confined to the Mount Palatine, could not, according to M. Rosa, have descended and remounted the *Intermontium*. The boundaries of the ancient city must have included only the *Cermalus*—that part indicated on the plan by dotted lines. This point being admitted, the difficulties presented by the texts of Tacitus, Aulus Gellius, and Solimus, are cleared away. M. Rosa considers, also, that he has been enabled to fix the position of the head of the steps of Cacus (*supercilium scalarum Caci*), and the probable situations of the

altar of Consus, the *curiæ veteres*, and the *sacellum larium*.

As regards the constructions of the time of the Cæsars, they may be divided into two groups:—those which constitute the Imperial palace properly so called—the *Ædes Publicæ* or *Imperatoriæ;* and those which were built by successive emperors in the vicinity of the public edifice to which they were attached. Of course the former, the public buildings, have been the principal objects of M. Rosa's attention and research. They occupy the upper part of the plan to the left, and are marked with the Roman numerals I. to X. This colossal edifice has always been considered as the work of the Flavians; and M. Rosa attributes it more especially to Domitian, the last of the Cæsars of that family. It is true that Suetonius, in his account of the great works executed by Domitian, does not mention the rebuilding of the palace of the Cæsars; and equally so that, notwithstanding that emperor's habit of giving his own name to all the works accomplished during his reign, the palace in question is not called after him by any contemporary writer, even amongst his most devoted flatterers. This may, however, have arisen, suggests M. Rosa, from its essentially and rigorously public destination. The publicity of the imperial palace was, as it were, one of the stipulations of the compact entered into between the people and the Cæsars. The Great Julius, who, before being named Sovereign Pontiff, inhabited a simple private house in the Subura (*in Suburâ modicis ædibus*, says Suetonius), installed himself, after his election, in the *Domus Publica*, at the foot of the Palatine Mount, near the point marked in the plan with the Arabic figure 7.

But the *Domus Publica* did not contain merely the habitation of the Cæsars, but also, as in the time of the ancient kings, the Sacred Hearth of the Country and the temple of Vesta. Dionysius of Halicarnassus tells us, that when the modest house of Hortensius on the Palatine Mount, inhabited by Augustus, had been burnt, that politic sovereign, on erecting another on rather a larger scale, ordered that it should be open to the public, not only because it had been built with the public money, but because, in his quality of Sovereign Pontiff, he ought to live in a house which was at once private and public. This tradition became afterwards a sort of political dogma, even under the successors of Augustus. The palace of the Cæsars never ceased to be a truly public edifice where each citizen was at home: it had not the accommodations of a private Roman dwelling; but the general arrangements, which were invariable and in a sense sacred, were maintained. It was the House of the Roman People, and Cæsar was only the first citizen. Nero lost sight of this clause of the contract. He found that the emperor was "not even lodged as a man," and built for himself that famous *House of Gold*, with its ponds, woods, baths, pavilions, and pastures, and which encroached, over the valley where the Amphitheatre now stands, to the very summit of Mount Esquilinus. But the Flavian emperors took care to destroy, or to apply to other uses, this monument of imperial folly; and Domitian would not allow the palace of the Cæsars to be rebuilt on an enlarged plan, adopting in preference that of the old Roman House.

The edifice, then, whose plan M. Rosa has reconstructed from the remnants he has discovered, was exactly that to which Nerva gave the designation of *Ædes Publicæ*, which Lampridius, in his "Life of Heliogabalus," calls *Ædes Aulicæ* and *Ædes Imperatoriæ*, and which the topographical writers of the fourth century called, in order to distinguish it from the imperial constructions, *Sedes Imperii Romani;* and that it was erected by Domitian, M. Rosa concludes from passages in contemporaneous writers, notably Martial and Statius, and from the peculiar make and stamps of the bricks used in its construction. The following is his description:—

The *Porta vetus Palatii*, at the head of the *Clivus Palatinus*, gave access to an open space in which the people circulated freely, and which held, in the case of the palace, the place of the enclosed *Atrium* of Roman houses. It will be seen, on reference to the plan, that this *Atrium* lies directly on the *Intermontium* which lies beneath the whole extent of the palace. A large flight of steps, mentioned by Ovid and Suetonius, led from the Atrium to the colonnade which ran all along the face of the palace; but they have not yet been opened up, out of consideration for the buildings which now stand over the site.

Ascending the rising ground we arrive at the portico, of which M. Rosa has collected all the fragments he could find. At three points the increased spaces between the columns mark the entrances to three distinct apartments.

Of these the centre one is the *Tablinum* (No. I.), in which, during the early periods, the archives of the family were kept (*tabulæ*, whence come the words *tabulinum*, *tablinum*); and there it was that the patron gave audience to his clients. The clients of the Emperor of Rome were the Roman people, in it the Emperor presided over the meetings of the Senate, his chair being placed in the centre of the tribune which faced the door. In several parts of the pavement and walls, the circuit of which is still complete, may be seen traces of rich marble incrustations. This apartment has passed hitherto for the famous Palatine Library, established by Augustus; it was discovered in the year 1720, by Bianchini, who, however, could not pursue his investigations.

The chamber marked II. was evidently the basilica, or supreme tribunal, and, consequently, peculiar to the imperial palace. The semicircular tribune with the *podium*, where the judges sat, and the two small lateral staircases, which led to these seats, are perfectly recognizable; and M. Rosa has found and replaced a portion of the *transenna*, or balustrade in white marble, which separated the audience from the accused. There are also traces of the columns which supported the two external galleries, while a piece of wall, entire as regards height, serves to show what was the altitude of the

hall. This, then, was the *Basilica Jovis*, where St. Laurence and other Christians were condemned.

The apartment No. III. is the *Lavarium*, which in every Roman house is found in or at the side of the *Atrium;* and Roman writers speak of sacrifices made to the *Lares* in the *Atrium* of the palace, before the sittings of the Senate.

Returning to the *Tablinum*, we pass thence into the *Peristylium*, or interior colonnade, which always occupied the centre of a Roman house. The area of this *Peristylium* would, if completely cleared, measure more than three thousand square mètres; but at least one-third of it is cut off by the buildings of the Villa Mills (anciently *Villa Palatina*), which also conceals a part of the house of Augustus, and, according to all appearances, the Temple of Apollo. A part of the portico of the *Peristylium*, which was in Carrara marble, has been restored by M. Rosa, and, as in the other parts of the palace, considerable fragments of ancient yellow and other marble facings are found on the pavement and along the stylobates. Here were, perhaps, the mural *phengites* which, according to Suetonius, the suspicious Domitian caused to be polished with great care; so that, while walking under the portico, he could see with a glance of the eye what was passing behind him.

Under the gallery to the south of the peristyle, marked on the plan with the letter H., you descend a few steps and find two small chambers, decorated with paintings and stucco-work, which have long borne the arbitrary designation of the Baths of Livia, and which, M. Rosa believes, belong to the Augustan period. Beyond the *Peristylium* opens No. IV., the *Triclinium* (from the Greek word τρίκλινον, three beds), situated, according to custom, in the same area as the peristyle, and reproducing exactly the form and arrangement adopted by the Greeks, according to Vitruvius, for grand banquetting-rooms. Cæsar's famous military architect says that these apartments opened towards the north, that they were arranged to contain two long tables placed facing each other, and that they were pierced with windows of the same width as the doors, in order that the guests "lying" at table should have a full view of the gardens upon which they looked out. All these features are found in the apartment in question, and, in addition, a large apsis at the end opposite the door, and where, no doubt, was placed a third and principal table—that of the Emperor. Amongst the vestiges of decoration in this room are enormous pieces of granite columns, and large fragments of red porphyry, which belonged to the pavement of the apsis; these have all been placed *in situ*, so as to give some idea of this sumptuously-decorated chamber.

To the westward of the *Triclinium* has been discovered a vast *Nymphæum* (No. V.), which doubtless held the place of one of the usual gardens, and which was evidently decorated in a manner to deceive the eye. In the centre of this apartment is a monumental fountain of elliptical form (shown in the plan), and furnished with two ranges of niches, which were evidently decorated with marbles, and contained statues. The lower range of niches touched the water, so that the reflection of its surface added to the brilliancy of the marbles and the richness of the ornaments. Here was found a fine statue of Eros, lifesize and with large wings, the restoration of which has been entrusted by the Emperor to M. Charles Steinhäuser, a clever German sculptor. M. Rosa has decorated this fountain with flowers and verdure, as he conceives it to have been in the time of the Cæsars.

Not far from the *Nymphæum* is a fine octagonal chamber (No. VI.), having four doors in its sides and the same number of niches in its angles; two of the doors communicate with the *Peristylium* and a side colonnade, and the room seems to have formed the main entrance to the former on that side of the palace.

The figure VII. marks eight rooms of various dimensions, but all hexahedral in form. Vitruvius tells us that this was the arrangement of conversation rooms, not only in the gymnasia, but also in private mansions.

The rooms indicated by the figure VIII. may be considered as antechambers to the *Basilica* and the *Tablinum*.

The apartments above named may be considered as constituting the principal mass of the *Ædes Publicæ*, and the private apartments were comparatively unimportant. Of the latter, that marked IX. is believed to have been the library; and No. X. one of those halls for declamation, which, borrowed from the Greeks, were first brought into use by the first of the Flavians.*

To the right of the building is a portico—a continuation, in fact, of that in front, and which has been uncovered along the whole side of the building. As in the principal façade may be remarked three chief entrances, D. E. F., of which the first leads to the *Basilica*, the second to the *Tablinum*, and the third to the *Peristylium*, through the vestibule (VI.) already referred to. It will be perceived that these colonnades afford ready means of access to all the principal parts of the palace. The openings in the side, as well as in the chief colonnade, looked on to a large open space; this was the *Area palatina*, devoted to public exercises and amusements. On the other side of this *Area* were the private habitations of the emperors, erected principally by Tiberius and Caligula. An ancient road, which traverses the *Area palatina* and leads to the *Peristylium*, passes by the house of Tiberius.

The excavations in this part of the hill are not so advanced as those on the site of the palace itself; but some interesting discoveries have been made. A long series of vaulted cells which open on the *Via Antiqua* formed, it is believed, the quarters of the Prætorian guard. In one of these cells are some rude scratchings—a galley, a man's head, &c. —which have the appearance of having been traced with some such instrument as the point of a sword. A passage connects these cells with the central *Peristylium* (M.) of the house of Tiberius.

* See Horace, Ep. i. 3–17.

Lower down, to the north of the latter, extend the buildings of the house of Caligula. In excavating to find the traces of the ancient *Clivus Victoriæ*, M. Rosa came upon a kind of colossal gallery, composed of two ranges of arches, one above the other (N. N.). A marble balustrade exists in the upper range, and bas-reliefs in stucco are to be seen on the vaultings and frieze; the nature of these latter, defaced though they are, is said to indicate the buildings which Caius Caligula constructed in an infamous fit of speculation, and to which his agents invited visitors in the basilics and public places.

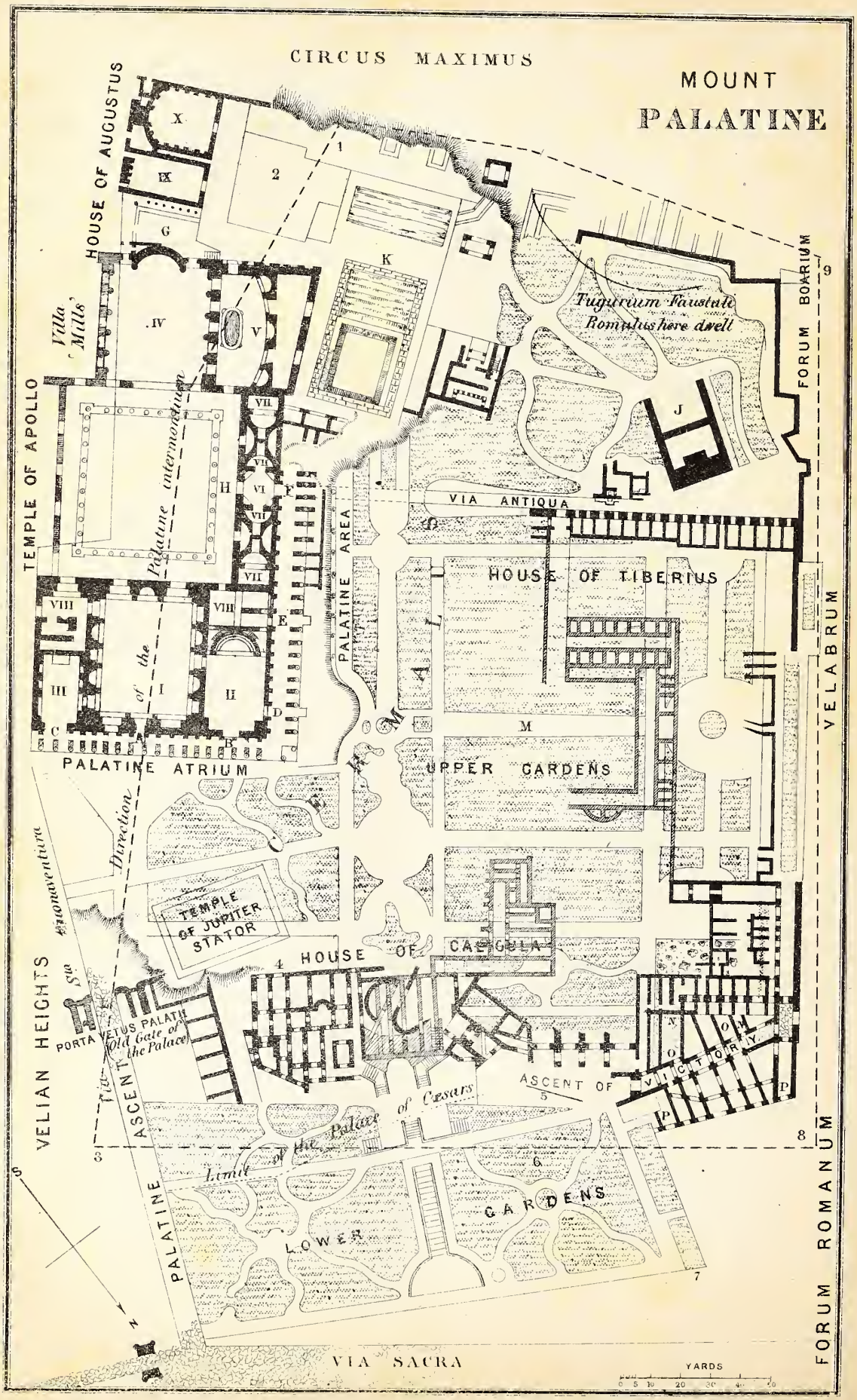
The constructions marked O. O., P. P., erected by the successors of Caligula, mask the galleries in question, and give them, in certain places, the air of a cavern. This spot, moreover, of all the splendid and terrible places here, is that which is haunted by the most terrible reminiscences. All the prestige of solemn acts and historic grandeur cannot here shut out the horrors of human infamy. Under these dark arches we see in our mind's eye the shade of the imperial fool, who threw a bridge across the Forum, in order that he might converse privately with Jupiter in the night. Here, perhaps, the impure Messalina paraded her own dishonour, and the haughty Agrippina concocted her sanguinary intrigues. That arch which opens on the *Velabrum* is the postern-door (*pars postica palatii*), by which the perfidious Otho, wading through blood to the throne, went to join his accomplices at the *Golden Standard*, leaving the kiss of Judas on the cheeks of him whose head and throne he coveted.

The tortuous way which traverses the Palace of Caligula M. Rosa believes to be the *Clivus Victoriæ*, as it is at the foot of this sloping road that Festus places the *Porta Romana*, the second gate of the city of Romulus, and the same, no doubt, by which the assassin of Galba made his escape. Outside of this gate should be found the steps which led, by way of the Velabrum, to the Circus Maximus. Near it were the Temple of Castor and Pollux, the *Domus Publica*, which was the dwelling of Cæsar, the grove dedicated to Vesta, and the dwelling of the sacred virgins; and, finally, here commences the *Forum Romanum*, a mine of gold, yet scarcely opened, for the historian and the archæologist.

Quitting now the habitations of the Cæsars, we again ascend Mount Palatine and glance at the monuments, anterior to the imperial epoch, which M. Rosa has discovered or indicated. A trench thirty feet wide has been opened at the point marked G. on the plan, that is to say, by the side of the portico which separates the *Triclinium* from the Library already mentioned (and, consequently, near the *Intermontium*), and has yielded good fruit. Here were found the broken columns of the portico G., of which the stylobate alone remained in its place. The foundations thus laid open are not extensive but possess great interest; they are said to belong undoubtedly to the time of the republic, and certainly anterior to the time of Sylla, as they are built of the stone taken from the Cœlian, one of the seven hills of Rome, the use of which was given up in Sylla's time, when Alba and Travertine stone came into use. The most important vestiges which M. Rosa has yet discovered of constructions anterior to the time of the republic are those of the Temple of Jupiter Stator, of the *Auguratorium*, and of the Temple of Jupiter Victor. The exhumation of the first of these is, however, not yet far advanced. The director wisely confined himself at first to the determination of the limits of the Imperial Palace itself and of the private constructions of the Cæsars, knowing that such a course would narrow the ground for his future researches. He argued, moreover, that the tendency to aggrandisement manifested by Tiberius, by Caligula, and by Nero would only have been arrested in presence of the sacred character of neighbouring edifices; and the discovered situation of the buildings of the Imperial period revealed to him the fact that certain monuments of the republic were preserved long into the Imperial epoch. As regards the temple promised by Romulus to Jupiter Stator, Titus Livius, Ovid, and other writers fix its position near to the *Porta Mugionia;* and, as the limits of the Imperial buildings on that side of the hill touch very nearly the slopes towards the Via Sacra, and moreover were connected with other constructions between which there was little space, it became evident that remains of the edifices of the republican period, and especially the *Auguratorium* and the Temple of Jupiter Victor, must be sought in other directions.

There remained to be examined a space of ground about 600 feet in length and 300 in breadth, in the western part of the Mons Palatinus and occupying the angle between the Velabrum and the Circus Maximus. On this spot M. Rosa has discovered two monuments, of which the antiquity is believed to be proved not only by the quality of the materials employed, but by their disposition and by the mode of construction, which is that known under the name of *square work*, or Etruscan properly so called. One of these monuments is composed of two terraces of unequal size, the smaller of which commands the larger, and both are contained between two great parallel walls, which serve as their supports. Against these walls also rest the two large flights of steps which give access from without to the great terrace, and thence to the smaller one above it. On the small terrace and against the central portion of the back wall advances a kind of rectangular rostrum or pulpit, which M. Rosa believes was without doubt the augural chair, the sacred seat whence the priests studied Destiny by observation of the heavens. Such is the general outline of the *Auguratorium*, marked J. in the plan, which was constructed, as tradition reports, on the very place where Romulus consulted the heavens respecting the foundation of Rome.

The position and conformation of the building in question seem to leave no doubt of its identity. Tacitus and Quintilian tell us that in a Roman camp —and old Rome was but a permanent entrenched camp—the *Auguratorium* was situated as near as possible to the *Prætorium* and to the western limit of the camp; Tacitus adds, that it contained in


CIRCUS MAXIMUS
MOUNT
PALATINE
HOUSE OF AUGUSTUS
Villa Mills
TEMPLE OF APOLLO
Palatine intermontium
Tugurium Faustuli
Romulus here dwell
FORUM BOARIUM
VIA ANTIQUA
PALATINE AREA
HOUSE OF TIBERIUS
VELABRUM
PALATINE ATRIUM
UPPER GARDENS
Direction
TEMPLE OF JUPITER STATOR
HOUSE OF CALIGULA
VELIAN HEIGHTS
PORTA VETUS PALATII
Old Gate of the Palace
ASCENT OF
Palace of Cæsars
Limit of the
PALATINE
LOWER
GARDENS
VICTORY
FORUM ROMANUM
VIA SACRA
YARDS

front of the augural chair an open space where the altar was placed. This open space is well represented in the ruin in question by the larger terrace which covers half the plan of the building.

The remains which M. Rosa recognises as those of the Temple of Jupiter Victor, marked K. in the plan, are situated to the south-east of the *Auguratorium*, near the *Nymphæum* of the palace, and it will be seen that the wall of the apartment in the rear of the last named runs parallel with the east side of the supposed temple, as those of other buildings do with the western wall. We are told by Titus Livius that the Temple of Jupiter Victor was built in pursuance of a vow of Fabius Maximus during the Samnite war, and the character of the constructions laid open accords with this. It is impossible to doubt that this temple was situate on Mount Palatine, from the following passage:—"*Palatinus continet aream palatinam . . . ædes Jovis Victoris*"—(*Notitia urbis*, reg. x.); and in *Curiosum urbis* it is stated that the temple is situated between the *Auguratorium*, the *Area palatina*, and the *Domus Dionis*. M. Rosa says, in the first place the disposition of the structure resembles what we see in that of some of the principal temples yet visible in ancient Latium, as, for instance, those of Hercules triumphans, at Tivoli, and of Castor and Pollux, at Tusculum. As in those temples, so in the remains of the one now discovered on the Palatine Mount, the approach is by imposing flights of steps alternating with landing-places or platforms; those commence from the road which runs along the front of the edifices constructed at the foot of the mount towards the Circus Maximus. The greater portion of the principal platform, which may be called the *Area Sacra* of the temple, is still entire, while the temple itself, standing on a much higher level, contains, although in a dilapidated state, remains of steps divided into two flights by another platform. The remains of its walls are in *square work*, that is to say, of hewn blocks of *tufa* or volcanic stone, in horizontal layers, but of irregular sizes, while the sub-basement, which supports the lower platform on the slope of the hill, is formed of stones of irregular form laid in cement—or "irregular reticulated" or "ashlar" work.

M. Rosa is now seeking for the ruins of the *Tugurium Faustuli*, which he places between the *Auguratorium* and the Temple of Jupiter Victor. Wherever his excavations have been completed he has decorated the sides of the cuttings with flowers and shrubs, and has moreover set up a number of finger-posts bearing quotations from Solimus, Varro, Tacitus, Ovid, Titus Livius, and other authors, in order to add interest to the ruins. We doubt not that amongst the visitors to those uncovered records of the past our own countrymen will form a considerable proportion, and therefore we hope our readers will thank us for this account of what has been done, and is still in progress, towards the illustration of the history of the seven hills of the eternal city. It is curious that the downfall of a modern Italian kingdom should thus have given rise to so much information being gathered concerning the cradle of its fathers; and it would be unfair to forget that one of the effects of the Italian war has been the placing of the Farnese gardens in the hand of Napoleon the Third, with whose name and that of his learned and zealous agent, the Palace of the Cæsars, the Temples of Jupiter, and the rostrum of the Augurs must for ever be associated.

DESCRIPTION OF THE PLAN.

I. Tablinum of the Palace of the Cæsars.
II. Basilica do. do. do.
III. Lararium do. do. do.
IV. Triclinium do. do. do.
V. Nymphæum, or Hall of Fountains.
VI. Entrance Hall, leading to the Peristylium from the old road by the house of Tiberius.
VII. Small chambers.
VIII. Dependencies of the Basilica and the Tablinum.
IX. Library.
X. Academy.
A, B, C. Entrances to the Palace from the *Atrium*.
D, E, F. Entrances from the *Area palatina*.
H. The Peristylium.
J. The Auguratorium.
K. Temple of Jupiter Victor.
L. Entrance to the Palace by the old road from the west.
M. Central Peristyle of the private palace.
N, N. Principal façade of the buildings of Caligula.
O, O, P, P. Successive additions since Nero down to Adrian.
Nos. 1 and 2. Position (supposed) of the *Curiæ veteres*.
3. Do. do. do. Ancus Martius.
4. Do. do. do. Tarquin.
5. Do. do. do. Clodius.
6. Do. do. do. Cicero.
7. Do. do. *Domus publica* inhabited by Cæsar.
8. Do. do. wood and Temple of Vesta.
9. Do. do. cavern and steps of Cacus.

*** The dotted lines show the supposed perimeter of the site of ancient Rome.

HOLBEIN IN GERMANY.*

By H. Ward.

PART II. BASLE.

BOLD as youth and health and genius could make him, young Hans Holbein set forth on his travels. As he left the school of high art in which he had been born, he may have dreamed of going to Italy; but for a time, at least, he turned a little westward and halted at Basle. His first work there has never been questioned. This was a signboard. It was not unconnected with the Muses; for it swung at the door of a poor school-

* *Holbein und seine Zeit*: von Dr. Alfred Woltmann. Erster Theil. Mit 31 Holzschnitten und einer Photo-lithographie. Leipzig, 1866.

master. It is now at the Basle museum, sliced in two, so as to exhibit both sides of it. One of them represents the junior school: to the left is the master at his desk, rod in hand, hearing three boys repeat their A B C; and at an opposite desk sits the mistress with a little girl. The other represents the adult school, where the master is setting copy-books before two hobbledehoys. Each side is dated 1516. And now that we have seen how our young artist earned his first crust of independence, let us glance at the place that was to be his head-quarters for ten years.

Basle was well described by a lively Italian, eighty years before Holbein's arrival. Looking down upon it from the neighbouring heights, he says, one is struck by the high-pitched roofs, and the many-coloured glazed tiles that glitter in the sun. Almost everything is new; for earthquakes and fires have half-ruined the old minster towers, and scarcely left one hundred old houses standing. The Rhine too, in the early summer, swollen by melting snows from the Alps, often sweeps away the long wooden bridge, and cuts off the northern quarter from the main body of the town. But the place is rich, and quickly recovers itself. The streets are wide enough, and well-paved; the churches are numerous, not indeed made of marble as in Italy, but still of handsome stone; and Florence cannot boast of neater dwelling-houses, each with its own fountain and courtyard and garden. There are splendid public fountains also, and more conduits than at Viterbo, and they are full of sweet and sparkling water. The people delight in breeding singing-birds, and they make the storks at home; for it is thought that if a stork's nest were disturbed, she and her mate would bring firebrands on to the roof. The public walks are closely shaded with pollard oaks and elms; and there the young folks race and wrestle, and shoot at the mark, or hurl the bar. The city walls are not high enough to stand a hot assault, but their defenders say that *they* are the walls; and indeed they are broad-shouldered and stout-hearted, only too fond of father Bacchus and dame Venus. As for learning, it is confined to the vulgar tongue; and the very name of Cicero is unknown.

The writer, whose letter we have been citing, was Æneas Sylvius (or Eneo Silvio Piccolomini, of Sienna), who played one of the leading parts in the Council of Basle (1431–1443). As soon as he became Pope Pius II., he thought of his former hosts, and their intellectual shortcomings, and he founded the University of Basle in 1460. It flourished rapidly, and helped to break through the class exclusiveness remarked by its founder. The Free City, as he knew it, was nominally governed by its bishop and two popular assemblies, but actually by a small oligarchy. No one below a knight was eligible for the post of burgomaster. Plebeian beauties were admitted to the state balls, but not their fathers and husbands, unless they were extremely useful to the aristocracy. This exclusiveness the nobles carried to church with them. Next to the massive altar-plate, the most striking ornaments were the shields of the dead magnates; and the living ones managed to combine religion and comfort and respectability in a way that was novel to their southern visitor. The bodies of the churches, says he, have wooden closets on each side; and the mistresses shut themselves up with their daughters and maids, in higher or lower closets, according to their rank, so that the noble ladies are quite invisible; but the untitled women show their heads when they stand up; the rest of the congregation can be seen down to the waist. The pew system, then, was antecedent to Protestantism, with which we are apt to connect it. Perhaps it marks the spirit of the northern races; who do not care so much about levelling the barriers of rank, as keeping a door open for a change of owners. The burgher may remove the knightly shield, but he quietly appropriates the pew. This sort of change was going on when young Holbein entered Basle.

The University had already done a brave piece of work, a large portion of which would not have pleased its papal founder. It had made the town an asylum for students. Not only those had come who desired instruction in the classics, in Hebrew, and in orthodox theology, but those also who longed for something like free polemical discussion. The new ideas had spread from student to townsman. The burghers had begun to jostle the nobles, and edge them out of office; and they had more than maintained the old independence of the Free City. They had refused to follow the Swabian League, when Maximilian turned it against Switzerland. But, loath to attack their emperor, they had stood neutral throughout the war. At the close of it, they had been harassed out of patience by the resentful Imperialists; and they had entered the Swiss Confederation in 1501. At the same time they had been at variance with their own bishop. His claims to be chief magistrate had often been contested: they were now set aside. His spiritual authority, and some political influence remained; but he was not left strong enough to remove the teachers, who were preparing the way for the Reformation.

A minor change, too, had taken place, which made the streets more pleasant for a painter. At an earlier period the substantial burgher used to wear sombre clothing himself, and enforce sombreness upon his juniors; and so it was to be again at a later period. But now, during this interval of excitement, the dark plumage was moulted, and bright colours flaunted in the sun. It was a carnival before the long Lent of Calvinism. The republican youths decked themselves like gallants of a court. In the drawings of Holbein, we see broad-brimmed hats and feathers, slashed jerkins and breeches, pinked shoes, openworked or embroidered shirts and frills, with brooches and other elegant fopperies. The women could not outdo their brothers, but they equalled them; and Æneas Sylvius would no longer have complained that the floral sisterhood might be mistaken for so many vestal virgins. In short, the old restraints had been

ANNA SCHECKENPURLIN
UXOR IACOBI MEIERI
Consulis quondam Reipublicæ Basilienſis
optime meriti.
Joh: Holbein pinxit annum agens XVIII. ext: Basil: in Muſeo Fefchiano.

Basileæ apud Chr. a Mechel Chalcogr.

H. Holbein pinx.t

B. Hübner fcalp:1790.

IACOBUS MEIERUS
REIP: BASIL: QUONDAM CONSUL PRUDENTISS:

Pietatis ſanae Cultor ac Promotor primarius

Natus Baſil: 1470. ob: 1541.

Ioh: Holbein pinxit annum agens XVIII. ext: Baſil: in Muſeo Feſchiano.

Baſileæ apud Chr: a Mechel Chalcogr:

removed, and not yet replaced by the new; and licence had introduced her twin daughters, smartness and slovenliness. The latter scandalized the Town Council now and then, enough to call for some special decrees. In 1506 it was strictly forbidden that any one should enter the hall of his guild without hose, unless indeed his coat was long enough to hide the bareness of his legs.

The times were ripe for the caricaturist. Basle had already contributed its share to the grim satire of mediæval art and literature. On the cloister walk of its Dominican cemetery was a Dance of Death, which was famous on its own account, and suggested many subjects for the more famous work by Holbein. It is vulgarly said to have been painted in 1439, when the Council of Basle was half-dissolved by the plague; and to have included portraits of the Pope and Emperor, and others; but a few fragments in the Basle museum are all that remain now; and before the series was engraved, it had been more than once painted over. Later in the 15th century appeared the *Ship of Fools*, by Sebastian Brandt, a learned poet of Basle; and it was soon translated, and its woodcuts imitated, in France and England. But these were works of general satire. There must be some piquant touch of personality to complete what we call a caricature. Such touches soon grow obscure; and Dr. Woltmann seems to have detected nothing more than faint traces of them, even in those drawings by Urs Graf, the goldsmith, which he describes so appetizingly. He can only say that a few religious subjects are openly caricatured, perhaps in ridicule of Italian originals. But when that humorous draughtsman died (about 1530), he probably left all sorts of nettles behind him, which had even then lost their stinging qualities. When we see his Thisbe stripped naked in her flight from the lion, stabbing herself over the corpse of a Pyramus in doublet and hose, we ascribe the travestie to the artist's simple ignorance of archæology. When we remark that the fountain-god, who presides over this sad catastrophe, is a Fool, we call it a stroke of general satire. It is nothing more now; but in its own day this design may have burlesqued some individual sentimentalism.* The same remark applies to his *School of Aristotle*, where the pupils discover the sage on his hands and knees, bridled and saddled, and ridden by a queen of Greece,—as Gown calls her,†—who is here attired like a pretty horsebreaker of Basle. Urs Graf has left a number of satirical allegories, where Nemesis is queen of all. The figures are dashingly drawn, says Dr. Woltmann, and so are the savage landscapes; but their riddles are hard to read. He still more often indulged himself in mere whimsies of diablerie; or else in strange wild contrasts of life and death on the battle-field, or under the gallows-tree.

From this draughtsman Holbein had something to learn, but nothing whatever to dread from his rivalry. To him Dr. Woltmann ascribes a few figures, which have been jumbled together with a few of Holbein's, and engraved by Mechel in his *Œuvre de Jean Holbein*, under the title of *Costumes Suisses*. Judging from this book, one might suppose that they were intended for nothing more; for their life is almost quenched in the engravings. But while those of Urs Graf have become mere tailors' blocks, those of Holbein still remain creatures of breath and motion. Holbein had so much vital fire in him, that he threw a spark of it into his slightest sketches; and his finished studies of lambs and bats, and "such small deer," might make one fancy, as Dr. Waagen says,* that he had never studied anything else. Photographs of these, and of other Basle drawings, amounting to eighty or ninety, are now on sale in London. We will specify two of them. The first is a design for stained glass: a broad shield, left blank for arms, on a pedestal, with a church tower and mountain landscape beyond it; above it a triumphal arch, framing the picture; the supporters are two halberdiers, one erect, the other leaning forward on his halberd,—not heraldic dolls, but real warders of the shield, yet so statuesque as to be in keeping with the general architectural design. It is worth noting that these are the originals of two of the ineffective plates in Mechel's *Costumes Suisses*. The other drawing is a battle-piece, that must have made Urs Graf tingle with pleasure or envy, perhaps with both. Two of the soldiers have drawn a little apart; but in the thick of the fray every one is fighting with every muscle of his body. The rest of the drawings are portraits, studies for wall-paintings, and so on. Some of the saints are figures of astonishing grandeur: but we must not dwell upon them; and still less upon the outline group of the Family of Sir Thomas More, which Holbein brought to Erasmus in 1529: we must return to where we left him, under the old school signboard.

He did not wait for better luck, we may be sure; he sought it, and found it. In the same year he painted half-lengths of Jakob Meier, the first plebeian burgomaster, and his wife. Of these Mechel, in his *Œuvre de Holbein*, has given engravings. A friend to whom we showed them exclaimed, "*That* was not the work of a youth of eighteen." The exclamation was a passing one, but probably none the less correct; and we received it as unbiassed testimony in favour of Holbein's new biographer. Dr. Waagen says that the whole workmanship is nearly as mature as the famous Dresden Madonna, at whose feet are kneeling figures of the same Jakob Meier and his family. His portrait is dated 1516: and the piece of gold between his heavily-ringed thumb and finger is a commemoration of the date, for in this year he had obtained the imperial recognition of the gold coinage of Basle. He was subsequently twice re-elected; and under him, in 1521, the last political privileges of the Bishop and nobles were swept away: yet he

* The same subject by the same hand, but rather differently treated, is reproduced in Rudolph's Weigel's *Holzschnitte berühmter Meister*.

† *Confessio Amantis*, Book viii., section *de Nomine illorum*, &c.

* *Kunstswerke . . in Deutschland*, vol. ii. p. 285.

always held fast to the old faith. He looks like a man strong enough for revolutionary times. In the original sketches (which are photographed) his own features are not quite so coarse as in the engraving, his crisply curled hair is finer, and there is more *bonhommie* about his mouth; and his wife's plain household dignity is much more refined and winning. But there are only indications of the other details, with notes of the colours. The notes on the first sketch are deciphered by Dr. Woltmann: they run thus—"Eyes black, barret-cap red, (hair) nut-colour, brows yellower than the hair, eyelashes like the brows." In the painting the black coat is strongly contrasted by this bright red cap. His wife's dress is red, deeply bordered with black: the gold embroidery of the chemisette, and its pendent white silk plaits and flossy tassels, are worked out with minute delicacy. The clear ruddy browns of the flesh-colour give a warm effect to each picture. We need hardly add that the pillars and vaultings of the background are in the style of the Renaissance.

Holbein was lucky in obtaining such sitters at the outset of his career. It is probable, however, that he and his elder brother took good introductory letters with them; for they were not only sons of a famous painter, but their uncle Sigmund (the same whose honest beard we described, as figuring in an Augsburg sketch-book) was now an artist of repute at Bern. And at Basle there was no lack of employment. The printing-presses were busily at work; and their chiefs were ripe scholars and patrons of art. They had just lost Johann Amerbach, who first adapted the Italian into our own modern type, and who was himself an editor of the Fathers. But there remained others as eminent. We need only mention one, Johann Froben (Frobenius). Holbein's portrait of him is here said to be lost; but two old copies of it remain, at Basle and at Hampton Court. His noble brain was a jewel in an ugly setting. His portrait has scanty hair to show, and that only at the back of the head; his homely features and wrinkled brow are bare. Yet we can see beauty in his face, when we think of what we have read of him. He was a single-hearted man, more bent upon perfecting his books than making money by them. When Erasmus committed to him his new editions of his own *Adagia*, and of the New Testament, the happiness of Froben was approaching its climax. One autumn evening, in 1513, a messenger came to him, who was soon discovered to be Erasmus himself. Froben's excitement may be imagined: he would hardly trust him out of the house, or let him go back to Louvain. Erasmus returned to the house year after year, for months at a time; and settled there finally in 1521, until Froben's death in 1527. This was probably the only man whom Erasmus ever loved and lamented with all his heart. His friendship must have been more precious than Meier's; and we find that Holbein worked for him in 1516, perhaps before he painted the portrait of the burgomaster.

In designing for book ornamentation, two of Hans Holbein's competitors were his brother and Urs Graf. They made meritorious designs; but those of Ambrosius Holbein look cramped, and those of Urs Graf coarse, as soon as one turns to the bold and graceful lines of Hans Holbein. His scroll-work is said to have been founded on that of Hans Burgkmair; and it is possible that others may have matched him, so far; but there can be no mistake about the hand, if the design has anything living in it. He is fond of naked boys; and so are we, when they are drawn by Holbein; whether they are strutting in procession with their shoulders under a shield, and the boy-king standing on it, or clambering over one another, and up pillars enwreathed with vine or apple branches. There is one head-piece that naturally reminds us of the *Nonnes Preestes tale*. A fox is scampering off with a goose, and turning his head round at a village swordsman, who is close at his heels, followed by boors with flail and spade, and a girl with a rake. Chaucer's verses are not a whit more lively. These designs were sometimes rather muddled by the engravers on metal: the wood-engravers were more completely masters of their material. The best of them all, perhaps, was Hans Lützelburger; to him was intrusted that master-piece, the full-length of Erasmus under a triumphal arch, standing with his right hand on a terminal figure; and he engraved the great scholar in a way that must actually have satisfied the loving soul of Johann Froben.

Both as designer and painter, Ambrosius has only been remembered for the sake of his younger brother. His known paintings are few and little esteemed. One is a tasteless imitation of Albert Dürer's *Greater Passion;* another, far better, contains the portraits of two boys in yellow: their faces are rather flat and unshapely (say the critics), yet simple and engaging in expression. His decorations belong to the same school as his brother's; and, like him, he inherited his father's skill in handling the silver point. On the 24th of February, 1517, "Ambrosz Holbain," painter, of Augsburg, was admitted into the guild, where painters, saddlers, and barbers were enrolled together. Nothing more appears of him, except the date of 1518 upon a drawing.

Three more years elapsed before the guild received Hans Holbein. It may very well be that he was then leading a roving life. There are tokens of his having painted at Zurich about this period; and one of the three years was probably spent at Lucern. In the latter town there once existed many church-paintings by him, the *Adoration of the Shepherds*, and other scenes of the life of Christ. But his principal labour there was employed upon the house of the Justice (Schultheisz), Jakob von Hertenstein. What between oil and fresco, he filled it inside and out. But not a trace or memorial of his work remains, except one small fragment of fresco, a study of one figure, and some slight sketches made by an amateur. The house was pulled down in 1824. Dr. Woltmann observes that it is only of late that the Germans have held wall-painting in any esteem. The Council of Basle told Holbein (in 1538) that his art was far too precious

to be lavished on old walls. And Dürer, when he had designed Maximilian's car of triumph in the Townhall of Nuremberg, left all the execution to his scholars. In spite of this northern distaste for frescoes, Holbein completed several; but by damp, or fire, or vandalism, all have perished.

A portion of the façade of Hertenstein's house was adorned with the *Triumph of Cæsar*, freely adapted from the copperplate engraving of Andrea Mantegna; and here we see one channel of Italian influence, in immediate connection with Holbein. On the spaces left by the windows, above the *Triumph*, were scenes of Greek and Roman story; among others that of Lœna, the girl who bit off her tongue rather than give evidence against Harmodius and Aristogeiton: this is the study that still remains. But the chief subject of the façade was a romance from that mediæval treasury the *Gesta Romanorum*. By the will of a dead king (runs the tale), it was found that two of his sons were disowned by him; the third was to be his heir; but he had forgotten to add the name. One of the strange judges of legendary times decreed that all three should shoot at the dead king's body, as at a target. Two of them shot; but one turned his head away, and thereupon the judge proclaimed *him* to be the lawful king. This curious subject has been treated by Francesco Ubertini (a pupil of Perugino), and by others, says Dr. Woltmann; but the "unhandsome corpse" makes an ugly blot in all their pictures. Not so in Holbein's. Here the dead father is set upon his kingly chair, in his robes, and the crown on his head,—a figure of bearded majesty, like Charlemagne in his tomb at Aix-la-Chapelle.

In the chapel was a pastoral scene—a herdsman visited by a vision of the child Jesus, surrounded by *the Fourteen Need-helpers*, who are personages of a German legend. In the dwelling-house were hunting and battle pieces; and, above all, the *Fountain of Youth*, where the old and halt and blind were seen washing themselves young and fresh again.

Dr. Woltmann's restoration, fairer, perhaps, than the reality, has proved for us such a palace of Armida, that we did not know how to leave it. We must now wait another month, before we present Holbein as a Master Painter to our readers; and if any of them should be induced, meanwhile, to read Dr. Woltmann's book for themselves, we feel that we shall have done them good service.

THE POULTRY OF FRANCE.

By W. B. Tegetmeier (Editor of the "Poultry Book.")

THE systems pursued in the culture of poultry in France and England are strangely in opposition to the characteristic traits of the two nations. In France attention is almost solely given to the practical value of the birds, and methods of feeding are adopted which are far superior to those followed in this country; the result being that the generality of the fowls found in the markets of Paris are of much better quality than those seen in the shops of the poulterers of London.

On the other hand in England—a country that prides itself on the practical character of its pursuits, more especially those that bear upon the production of animal food—poultry, as a rule, are badly cared for, and, excepting the comparatively few first-class Dorkings that are to be seen in the shops of the west-end London poulterers, the supply of table fowls is alike scanty and inferior.

It is true that of late years the establishment of poultry-shows in this country has led to great improvement in the different breeds; but the characteristics that have been mainly attended to have been those of showing purity of blood, and regularity of marking in the plumage, rather than such as render the fowls more valuable as table poultry.

At the English shows we rarely see prizes offered for the best fowls, considered with especial reference to their value on the table. In France, on the contrary, shows of dead fat poultry are held, at which large prizes are offered for the best specimens, those with the largest proportion of flesh compared with the weight of bone and valueless parts, the whitest skin and fat, and such as show signs of rapid growth and early maturity.

At one of these exhibitions held at the *Palais de l'Industrie*, at Paris, between two and three thousand specimens of fowls, ducks, geese and turkeys, all trimmed ready for cooking, competed for the prizes offered for the encouragement of this branch of rural economy. The first prize for fowls was a gold medal and the sum of 4,000 francs. After the awards, the judges, consisting of the president of the Corps Législatif for the district of La Bresse, two inspectors-general of agriculture, four farmers, and four dealers in poultry, had specimens of the various breeds cooked and tested practically, when the cost of feeding, age of specimens, market price, and loss of weight in the various processes of cookery, tenderness and sapidity of flesh were taken into consideration.

The best idea of the great value attached to poultry as a supply and source of food in France, may be obtained from a consideration of the statistics of the subject, as compiled by M. de Lavergne, one of the most trustworthy of the French agricultural authorities. The annual value of the eggs produced in France is estimated by him at no less than 125,000,000 francs, or £5,000,000. The poultry he values at an equal amount. Supposing these estimates to be correct, and there is no reason to doubt their accuracy, the consumption of eggs and poultry would amount to 5s. per head

annually for the whole population of the French empire. In Paris a very exact account of the consumption of poultry and eggs is kept. In the year 1862, the value of the poultry sold in that city amounted to £800,000; that of the eggs to nearly £500,000. At the present time England imports one million of eggs daily from the Continent. It may be asked what are the conditions under which poultry are reared to so much greater advantage in France than in England? Does it arise from the different social condition of the people, the arrangements of the markets, or the varieties of poultry generally cultivated? All these causes have their share. The division of the land into numerous small holdings, gives a much greater facility for poultry-keeping than exists where large farms are chiefly the rule. It cannot be too strongly impressed on poultry amateurs that very large numbers of fowls kept in one locality never do well. In France there are no such establishments; the vast supply of fowls and eggs to the Paris markets, and of eggs to England, being all derived from poultry-yards where comparatively small numbers are kept. The arrangements existing for the sale of poultry in London are of such a character as of necessity to prevent the metropolis being well supplied, inasmuch as they offer no inducements for the agriculturists to send dead fowls to the markets; for if a farmer kills a number of good poultry for the London market, he has to consign them to a salesman on whom he has no check whatever, and who takes whatever share of the proceeds he chooses to retain. Under these conditions it is not surprising that farmers do not find it profitable to rear fowls for the London markets.

The best fowls that we have in the metropolis are those bought up when young by the higglers of Kent, Surrey, and Sussex, then fatted, killed, carefully plucked and trussed, and brought by the vendors themselves to the wholesale markets; but these first-class capons, as they are called, usually cost the consumer from five to ten shillings each.

The varieties of poultry kept in France as profitable stock next demand our attention. It may be stated that the French poultry-rearers have not been in the habit of paying any great degree of attention to what is known in England as purity of breed, nor to uniformity of marking in the plumage. They have essayed to obtain fowls with small, delicate, though firm bones (which in good specimens do not exceed one-eighth of the weight of the bird), white skin and fat, early maturity, and aptitude to fatten. Nevertheless, several very distinct breeds are cultivated, and from their great practical value are rapidly rising into repute in England as valuable and profitable fowls. Specimens of the best of these breeds are admirably figured in the coloured plate. The parti-coloured cock and hen in the foreground represent the celebrated Houdan breed; the black pair behind them, the Creve-Cœurs; and at the top of the plate are specimens of the no less celebrated fowls of La Flèche.

The Houdans, which may be characterized as the Dorkings of France, are large, compact birds, very hardy in constitution, abundant layers of fair-sized eggs, with a broken plumage of black and white, largely developed tripartite combs, and abundant feathered crests. The crests of the cocks consist of long pointed feathers, whilst the topknots of the hens are more compact and rounded. In these days, when the hideous and unnatural *chignon* is fashionable, surely we may imagine this appendage would be highly esteemed. In one respect the hen has the advantage over her human imitator, her *chignon* is always one of her own growth.

The Creve-Cœurs, or celebrated fowls of Normandy, closely resemble the Houdans, but their plumage is much darker, and in the most valued species is entirely black. Moreover, the comb differs from that of the Houdan, being two-horned or bicorned. Creve Cœurs are most valuable table-fowls; they furnish a large proportion of the best fowls for the Paris markets.

The La Flèche have been aptly described as long, weird, hobgoblin-looking birds. They differ very much from the two varieties just described, being exceedingly hard and close feathered, and long in the leg. If the Houdans be compared with our Dorkings, the La Flèche should be classed with our Spanish; though, as profitable layers and valuable table-birds, they are far superior to the Spanish, which, unfortunately for profitable purposes, have been of late years reared in England mainly as a fancy or ornamental fowl, one offering a striking contrast of white face, red comb, and black plumage; rather than as a full-sized bird, valuable as an abundant layer of large eggs.

Neither the La Flèche nor the Creve-Cœurs have been found to possess the extreme hardihood of the Houdan, though all of them must be regarded as valuable additions to our stock of domestic fowls.

To render this article of the greatest practical value, I am desirous of calling attention to the method of fattening fowls that is followed in France, as it is very different from that adopted in England. For this purpose, I will avail myself of a very good paper written by Mdlle. Millet Robinet, one of the highest authorities on all subjects connected with French poultry, condensing her account so as to bring it within the compass of the present article.

Mdlle. Robinet says that the fowls to be fattened should not exceed six or seven months old, and that the pullets should be put up before they have laid, should be in good condition, and well fed, from their birth up to the day on which they are cooped. Mdlle. Robinet regards cramming as the most economical and effectual mode of proceeding. The fowls to be fattened are placed in coops in which each has its own compartment. The coop is a long narrow wooden box, standing on short legs; the outer walls and partitions are close boarded, and the bottom is made with rounded spars $1\frac{1}{2}$ in. in diameter, running lengthways of the coop; on these spars the fowls perch. The top consists of a sliding door, by which the chickens are taken out and replaced. The partitions are eight inches apart, so that the fowls cannot turn round. The length of each box is regulated by the

number of divisions required, the cocks and pullets, and the lean and the fat lots, not being mixed up indiscriminately, because their rations differ, and the new comers would disturb the old settlers by their noise. The floor below the boxes is covered with ashes or dry earth, which is removed every two days with a scraper.

The food is chiefly buckwheat meal, bolted quite fine. This is kneaded up with sweet milk till it acquires the consistency of baker's dough; it is then cut up into rations each about the size of two eggs, which are made up into rolls about the thickness of a woman's finger, but varying with the sizes of the fowls; these are subdivided by a sloping cut into "pâtons," or pellets, about two and a half inches long. A board is used for mixing the flour with the milk, which in winter should be lukewarm. This is poured into a hole made in the heap of flour, and mixed up little by little with a wooden spoon as long as it is taken up; the dough is then kneaded by the hands till it no longer adheres to them. Some say that oatmeal, or even barley-meal, is a good substitute for buckwheat-meal, but Mdlle. Millet Robinet is not of that opinion. Indian corn-meal may do, but it makes a short crumbly paste, unless mixed with buckwheat-meal, when it answers well if cheap enough; but buckwheat is a hardy plant, which may be grown anywhere at small cost.

In cramming, the attendant has the buckwheat pellets at hand with a bowl of clear water; she takes the first fowl from its cage gently and carefully, not by the wings or the legs, but with both hands under the breast; she then seats herself with the fowl upon her knees, putting its tail under her left arm, by which she supports it; the left hand then opens its mouth (a little practice makes this very easy), and the right hand takes up a pellet, dips it in the water, shakes it on its way to the open mouth, puts it straight down, and carefully crams it with the forefinger well into the gullet; when it is so far settled down that the fowl cannot eject it, she presses it down with the thumb and forefinger into the crop, taking care not to fracture the pellet. Other pellets follow the first, till the feeding is finished, in less time than one would imagine. It sometimes happens in cramming, that the trachea is pressed together with the gullet; this causes the fowl to cough, but it is not of any serious consequence, and with a little care is easily avoided. The fowl when fed is again held with both hands under its breast, and replaced in its cage without fluttering; and so on with each fowl. The chickens have two meals in twenty-four hours, twelve hours apart, provided with the utmost punctuality: if they have to wait, they become uneasy; if fed too soon, they suffer from indigestion, and in either case lose weight. On the first day of cramming only a few pellets are given; the allowance being gradually increased till it reaches twelve to fifteen pellets. The crop may be filled, but before the next meal the last must have passed out of the crop which is easily ascertained by gentle handling. If there be any food in it, digestion has not gone on properly; the fowl must then miss a meal, have a little water or milk given it, and a smaller allowance next time; if too much food be forced upon the animal at first, it will get out of health and have to be set at liberty.

The fattening process ought to be complete in two or three weeks, but for extra fat poultry twenty-five or twenty-six days are required; with good management you may go on for thirty days; after this the creature becomes choked with accumulated fat, wastes away, and dies. The fowls are killed instantaneously by piercing the brain.

After plucking and trussing, the chicken is bandaged, until cold, to mould its form; and if the weather is warm it is plunged for a short time into very cold water. A fowl takes usually rather more than a peck of buckwheat to fatten it. The fat of fowls so managed is of a dull white colour; their flesh is, as it were, seen through a transparent, delicate skin.

It must not be imagined that the subject of French poultry and poultry-keeping is exhausted in the previous pages. There are in addition to the breeds that I have described, several other very good varieties, such as the Gueldres, the fowls of La Bresse, &c.; but I have already reached the assigned limits of my article, and must refer those who required fuller information to the ninth and tenth numbers of the "Poultry Book," where they will find the subject of French poultry treated *in extenso*.

OUR WINTER VISITORS.

THE periodical phenomenon connected with the migration of birds has long attracted the attention and aroused the curiosity of mankind. Poets and philosophers of every land and age have drawn endless similes and illustrations from these mysterious movements of the feathered tribes; and we read in the oldest record of the human race, that "the stork knoweth her times." Out of 361 distinct species of birds (numbering all which have a claim to take a place in our British Avi-fauna) forty-eight species may be considered winter visitors. Not the least remarkable circumstance connected with these winter visitants is the unerring punctuality with which they arrive on our coast; year after year returning to their winter haunts in the same week, and often within a day or two of their accustomed time. This wonderful regularity to fixed times and seasons is most apparent on the Eastern coast of our island, for it is on these shores that the tired wings of the count-

less thousands of weary wanderers first close after their long flight over the many miles of wild and stormy sea.

"We hear the beat
Of their pinions fleet,
As from the land of snow and sleet
They seek a southern lea.

"We hear the cry
Of their voices high
Falling dreamily through the sky,
But their forms we cannot see."

It is mainly during October that this great movement Southward takes place, and it is in that month we may almost daily expect the arrival of some one or other of the varied tribes of the Northern bird-army, which will now for some months find a home in the more genial climate of our island, till the warm suns and bursting vegetation of spring again impel them northward to their summer breeding-haunts, in the Norwegian pine-forests, or amidst the dreary solitudes of the Lap falls. As yet how little do we understand the spring of that mysterious instinct which induces these many thousand of winged creatures, with such unerring punctuality, to make twice a year so long a journey,—in the spring northward, often to far up within the Arctic circle, and again in the autumn leading them back again to the middle and southern districts of Europe. All we can know is, that

"There is a Power whose care
Teaches their way along that pathless coast,
The desert and illimitable air,—
Lone wandering, but not lost."

Fortunate it is for the poor birds; that they have these thousands of square miles of "happy hunting-grounds" to retreat to—wild solitudes where the foot of man seldom enters—untrodden save by the nomadic Lap and his reindeer—nature's own wild gardens, where many a lovely arctic plant is "born to blush unseen." There in peace they can devote themselves to the duties of incubation, and then with renewed strength and numbers, again marshal their ranks to seek a warmer clime. How strong must be the motive which induces our migratory birds to make these long journeys; for be the weather stormy or fine—the season open or severe—when the time comes for their appearance, so surely, within a day or two, shall we find them in their accustomed winter haunts. It would be an interesting sight could we watch the departure of one of these large flocks of birds from the pine-fringed shores of the North. It is seldom, however, that these great migratory movements can be observed by man, as they almost invariably take place during the night. We might suppose that many of these birds, as the little "Gold-crested Wren," the Fieldfare, and Redwing, all such birds, in fact, as feed during the day, would find some difficulty in breaking off their regular habit of retiring to roost at sundown; but this migratory passion must, indeed, be strong and all-powerful, thus to overrule their ordinary habits. It is a well-known fact that birds of passage kept in confinement exhibit peculiar restlessness and anxiety at their accustomed migratory season; and this restlessness is shown even when they have been long removed from all the associations of their wild existence.

It by no means follows that those birds which first leave our shores in the spring for their northern breeding-ground are amongst the first to return—the reverse is often the case. The Grey Plover and Whimbral, both birds of passage, are amongst the last to leave our shores. We have seen them in considerable flocks as late as the end of May. The Grey Plover breeds far up within the Arctic circle, and its nest has rarely been found. The breeding-grounds of the Whimbral are more extensive—from the north of Scotland to the most northern districts of Europe. Both these species may again be found, in small parties, on our coast in August. The Redwings invariably leave before the Fieldfares. We have repeatedly observed large flocks of the latter on the east coast during the second week in May.

The Redwings return about the last week in October, the Fieldfares about the same time. Redwings never sing in England, and their winter notes are very different to their summer song. Those who have listened to the wild, sweet notes of this bird in its native pine-forests, poured forth hour after hour in the calm beauty of a northern summer night, will understand why it has earned the sobriquet of the Swedish nightingale.

It is a wonderful fact, and showing the great power of endurance on the wing that these migratories possess, that they can in one flight thus bridge across the Northern Ocean. The distance from the nearest part of the coast of Norway to the east coast of Yorkshire, say Flamborough Head, is about 380 miles; and calculating the speed of a strong-winged bird, as the Woodcock, Fieldfare, &c., at the average rate, for the journey, of sixty miles an hour, they would occupy between six and seven hours in the passage. But it is more surprising still that the smaller species of birds, as the little Golden-crested Wren, are able to make this stormy passage. Thousands of these exquisite and delicate little creatures arrive on our eastern coast about the second week in October, usually preceding the Woodcocks. When we look at the small wings and delicate, fragile form of these little wanderers, we are lost in wonder at their marvellous endurance, and the instinct which has guided their tiny flight across these many miles of the wild North Sea. How many thousands of times must those small wings have beaten the "cold, thin atmosphere" before they closed to rest on the shingly beach of England! Spurn Point is a great rendezvous for the Gold-crests before proceeding inland, and we have seen them in considerable numbers on the Lincolnshire side of the Humber. Mr. Morris, in his "British Birds," relates the fact of a flock of Gold-crests alighting on the rigging of a vessel fourteen miles from land, off Whitby. The Redwings, and other birds of passage, have also been known to settle in large flocks on the rigging of vessels in the North Sea, no doubt finding it a

pleasant break in the journey. It is no unusual circumstance for the keepers of our lighthouses to pick up birds of various species dead at the foot of the lantern;—attracted, like moths to a candle, by the strong glare of these night-beacons, they dash in full flight against the thick glass, and are killed. We remember, two years since, the circumstance of a woodcock dashing right through the glass of the Flamborough lighthouse, which is a quarter of an inch in thickness. It was picked up quite dead and terribly mutilated, from amidst the lamps.

Independent of our regular winter visitants, we have at this season many casual acquaintances, who, from one cause or other, wander to our coasts. We have now before us a list of birds shot during the present autumn in the neighbourhood of Flamborough. Amongst them we find many rarer visitors, as—Sabine's Gull (*Larus Sabini*), Little Gull (*Larus minutus*), Manx Shearwater (*Puffinus Anglorum*), Greater Shearwater (*Puffinus major*), Pied Flycatcher (*Muscicapa luctuosa*), Crossbill (*Loxia curvirostra*), Little Tern (*Sterna minuta*), and many others.

We all can sympathize with our feathered visitors in their long night-wanderings over wintry seas; for we also are like birds of passage, ever on the wing about life's stormy sea, journeying towards the unknown and distant land; and,—

> "He who, from zone to zone,
> Guides through the boundless sky their certain flight,
> In the long way that we must tread alone,
> Will lead our steps aright."

ANCIENT GREEK AND ROMAN FIELD SPORTS.

By the Rev. W. Houghton, M.A., F.L.S.

III.—WILD-BOAR HUNTING.

THE frequent allusions to the chase of the wild boar which occur in the writings of Greek and Latin authors show with what ardour this sport was followed by ancient sportsmen. The danger incurred, the courage, patience, and skill necessary to ensue success which the chase of the wild boar always calls forth, rendered this sport peculiarly attractive to the ancient Greek and Roman. The description of the Calydonian hunt, so graphically given by Ovid, though told in highly poetical language, is scarcely an exaggeration of the hazardous nature of this species of chase—"*periculosæ plenum opus aleæ*"—to borrow a well-known expression of the bard of Venusia.

Before I attempt to give some account of the made of hunting the wild boar pursued by the ancients, it will be desirable to take a survey of the implements employed in the capture of wild animals generally. Nets, of course, were very necessary. There were three principal kinds in use amongst the sportsmen of ancient Greece and Rome; and although it is not easy to learn their exact form and mode of use in every particular—for the descriptions given by Xenophon and Julius Pollux are not always very clear—still it is quite possible to get a fair general idea of their structures and uses. The nets employed in hunting were (1) the δίκτυα, (2) the ἐνόδια, and (3) the ἄρκυες. The δίκτυα—which corresponded to the Latin *retia*—were long, sean-like nets, used for encircling covers, or for setting in the open country. Xenophon recommends all these kinds to be made of fine flax from Phasis or Carthage. The size of the mesh and strength of the strands in each varied in relation to the game which it was required to take. So, with respect to their length, they varied from ten to thirty fathoms, beyond which, Xenophon says, the δίκτυα were difficult to manage; but Plutarch, in his "Life of Alexander," speaks of hunting-nets more than twelve miles long! A strong rope, called σαρδών, passed through the upper portion of the *dictuon*. The net was kept upright by a number of forked stakes, called στάλικες (*ancones*), of unequal sizes, according to the nature of the ground. (2) The nets termed ἐνόδια—answering to the Latin *plagæ*—were much smaller than the last named; they were set, as their name implies, in roads, paths, narrow openings between bushes, in game-tracks, &c. They appear to have been pretty much of the same form as the *dictua*. (3) The ἄρκυες were very different in shape from the other two, and were much the smallest. In form they resembled a woman's head-dress, having a wide mouth, and gradually narrowing to a point. They corresponded with the *cassis* of the Romans. A rope ran round the mouth of the net through nooses or rings, which served to close the entrance when game entered it.

Other instruments necessary for the chase were javelins (ἀκόντια); boar-spears (προβόλια); short swords, for defence in case of an attack from wild animals; brush-hooks, for clearing away spaces in thickets wherein to set the nets; traps (ποδοστράβαι, or ποδάγραι, described in Part II.); running-nooses (ἁρπέδονται), like the "gin," or "grin," perhaps, of our modern poacher; bows and arrows, &c. The hunter of the hounds (κυνηγέτης) was the important person. He was accompanied by various attendants to whom especial duties belonged—such as net-carriers, trackers, markers, watchers for the game when it got into the net, keepers of the ἄρκυς, to draw the ropes and close the purse-net. The qualifications of a good huntsman were, that he should be young, about twenty years of age, and fond of his employment. He was to be of light frame of body, and active; a good runner; a sharp, clever fellow, fond of danger and hard work; self-confident, vigilant; able to stand any amount of fatigue, never giving

in before the capture is made. He was to go to the field clad in a light dress (χιτών) reaching down to the knee; the dress was not to be white, nor of any conspicuous colour distinguishable by the prey at a distance; the chlamys (χλάμυς), or scarf, he was to wrap round the left arm when in pursuit of a wild animal. The boots were to reach half way up the calf of the leg, and were to be fastened by strong bands; and he was to carry a short, thick staff in his right hand. In addition to the implements of chase already mentioned, there was the feathered line, *linea pinnata*, called, from the terror it was supposed to instil into the prey, *formido*, or *metus*. To this Seneca refers—

"Nec est mirum, cum maximos ferarum greges linea pennis distincta contineat et in insidias agat: ab ipso effectu dicta formido."—(*De Ira.*, ii. xii.)

The *formido* was principally used in the chase of deer, but it was also employed in that of other animals. Feathers of different birds and of various hues were tied to long ropes, and placed in open spots in woods, in order that the game may be scared away from thence into the nets. To this there are many allusions in ancient authors. The following lines from Gratian show that the *formido* was considered a very effectual instrument in aiding the capture of wild animals:—

"Sunt quibus immundo decerptæ vulture plumæ
Instrumentum operis fuit et non parva facultas.
Tantum inter nivei jungantur vellera cygni:
Et satis armorum est. Hæc clara luce coruscant
Terribiles species: ab vulture dirus avaro
Turbat odor silvas, meliusque alterna valet res."—
Cyneg. 75—80.

which may be thus translated:—

"There are those who use with great success as an instrument of the chase, feathers plucked from the filthy vulture. Only let these be mixed with the downy feathers of the white swan, and other weapons will be unnecessary. Let this terrifying object glitter in a bright light, while the dire smell from the feathers of the greedy vulture taints the woods. The feathers are more successful if placed alternately."

Nemesian speaks of the utility of the feathered line in the following words:—

"Linea quin etiam, magnos circumdare saltus
Quæ possit, volucresque metu concludere prædas,
Digerat innexas non una ex alite pinnas.
Namque ursos magnosque suus cervosque fegaces
Et vulpes acresque lupos, ceu fulgura cœli
Terrificant, linique vetant transcendere septum."—
Carm. Venat. 303—308.

"Let the line, too, which can surround large woods and terrify the swift prey, bear inwoven within it feathers from various birds; for, like the thunder of heaven, they alarm bears and huge wild boars, swift stags, foxes, and savage wolves, and prevent their passing the feathered barrier."

It may be interesting to observe that this mode of hunting with the feathered line was practised by the Sicilians about 200 years ago.

"When the nobles or gentry are informed which way a herd of deer passeth, giving notice to one another, they make a meeting. Every one brings with him a cross-bow, or a long bow and a bundle of staves. These staves have an iron spike at the bottom, and their head is bored with a cord drawn through all of them. Their length is about four feet. Being thus provided, they come to the herd; and there, casting themselves about into a large ring, they surround the deer, and then every one of them receives a peculiar stand, and there unbinding his fagot, ties the end of his cord to the other who is set in the next station; then, to support it, sticks into the ground each staff about the distance of ten feet one from another. Then they take out feathers which they bring with them, dyed in crimson for this very purpose, and fastened upon a thrid, which they tie to the cord; so that, with the least breath of wind, they are whirled round about. Those which keep the several stands withdraw, and hide themselves in the next covert. After this the chief ranger enters within the line, taking with him only some hounds which draw after the herd, and, coming near with their cry, rouse it. Upon which the deer fly till they come towards the line, where they turn off towards the left, and still gazing upon the shining and shaking feathers, wander about it as if they were kept in with a wall or pole. The chief ranger pursues, and calling to every one by name, as he passeth by their stand, cries to them that they should shoot the first, third, or sixth, as he shall please; and if any of them miss, or single out any other than that which was assigned by the ranger, it is counted a disgrace to him: by which means, as they pass by the several stations, the whole herd is killed by diverse hands." (Wase's *Preface to his translation of Gratius.*)

Javelins (ἀκόντια) and boar-spears (προβόλια) were necessary weapons of the chase; the former were generally made of ash or beech-wood, tough and compact, each with a broad, sharp bronze or iron head; to the centre a leathern thong was firmly fastened, by means of which the javelin was hurled. The *acontion* was usually employed in the capture of stags and other animals which may be shot at a distance. The boar-spear was made of cornel-wood, with a strong, sharp iron head, into the hollow portion of which the shaft was fitted. The cutting portion was called the obelisk (ὀβελίσκος); it had sharp wings on either side, broad at the upper part, and gradually becoming narrow till it disappeared in the point, or tongue (γλώσση). At the end of the hollow iron part of the spear, just in front of the wings, were two projecting teeth of strong iron (κνώδοντες), one on each side; the object of which was to prevent the irritated animal reaching the hunter by pushing its body along the spear. It was held in the hand, and was not fitted with leathern thongs.

Xenophon gives many instructions about boar-hunting: he recommends either Indian, Cretan, Locrian, or Spartan dogs; the two former were noted more especially for their great strength and courage; the latter for their good noses. The net principally used in the chase of the wild boar was the ἄρκυς or purse-net. It was, of course, made of very strong cords, and of large meshes. The traps were similar to the deer-traps. The hunters were to go in company, in order that one might assist another in case of accident, in so perilous a chase.

"When they have come to a place likely for a boar, they must bring up the dogs quietly, letting one of the Spartan dogs loose, and keeping the other tied, and go round about the place with the loose dog. When this dog has found traces of the boar, they must continue their course along the track. There will be many indications of the boar to guide the hunters; marks of his footsteps on soft ground; pieces of the shrubs broken off in thickly wooded parts; scratches of his tusks on the large trees. The dog pursuing the track, will generally come to some woody spot, for the animal commonly lies in such places as are warm in winter and cool in summer. When it reaches the beast's

lair, it begins to bark, which, however, does not often rouse the boar. It will be necessary, therefore, to take the dog and tie him up with the others at some distance from the lair, and stretch the nets at the entrance to the thicket, hanging the meshes upon the forked branches of the wood. The net must be spread in a circuit extending outwards to some distance, placing branches of trees as supports on each side within, in order that the rays of light may penetrate through the meshes as much as possible into that circuit, and that the part within it may be as clear as possible for the animal when he rushes towards the nets. The rope that runs round each net must be fastened to some strong tree, and not to bushes. The open passages hard by must be stopped up, in order that the boar may rush into one or other of the nets." (Xen. *de Apris Venandis*, cap. x.)

The hunters are then told to return to the dogs, and unloose them, and to proceed with javelins and spears in hand. One of the most experienced is to go in advance and cheer on the dogs, the rest to follow at short intervals between each of the party, for if the enraged animal made an attack upon a close body, he would be sure to wound some of them. The dogs are then to start the boar from his lair; and the hunters to throw their javelins at him, and to pelt him with stones, and to try to drive him into one of the nets. If the boar refuse to push forward into the net, some of the most skilful of the hunters are to go up to him and press on him with their javelins, and try to make him pull the rope that went round the net to its utmost stretch. If, notwithstanding all their efforts, the animal refuses to stretch the rope, and is resolved to turn back, then one of the party must take his boar-spear and go up to him, "holding the spear with the left hand on the fore part and his right on the hinder, for the left directs it, and the right impels it; the left foot must be in advance, corresponding with the left hand, while the right is behind in accordance with the other hand." The feet are to be placed about as far apart as in wrestling, and in this way the hunter is to advance with left side forward, "looking straight into the very eye of the boar, and watching every movement of his head." There is danger lest the animal by a side thrust of his head should wrest the spear out of the hunter's hand; should such a catastrophe occur, the hunter is recommended to throw himself flat on his face, clinging to whatever is below him; for if the boar fall upon him in this position he will be unable to seize his body, on account of his tusks being turned up (!); but if he attacks him standing erect, he must necessarily be wounded. We are next told that the boar will endeavour to raise the hunter up, and that if he cannot do so, he will trample upon him with his feet. At this critical juncture another hunter must come up close to the animal, and, by irritating him, draw his attention off from his prostrate companion on to himself. The other must then jump up, spear in hand, and try to thrust it in above the shoulder-blade of the boar, pressing against it with all his might; the spear-guards will prevent the boar from reaching the hunter.

"So hot are the boar's tusks," adds Xenophon, "when he is just dead, that if a person lays hairs upon them, the hairs shrivel up, and when the boar is alive they are actually red hot (διάπυροι) when he is irritated, for otherwise he would not singe the tips of the dog's hair when he misses a blow at their bodies!"

Perhaps no poet of classical antiquity surpasses Ovid in the animated description he gives of the famous Calydonian Hunt. The picture of the wild boar which the angry Diana sent to ravage the country round Calydon, because Œneus, king of that city, had neglected to sacrifice to the goddess, is drawn with much spirit in a few striking lines. The mighty forest rising from the plain, its trees growing for ages, never thinned by man—

"Silva frequens trabibus quam nulla ecciderat ætas,"

amid whose tangled brushwood the great wild boar had his lair; the neighbouring valley, with its rivulets of water, and pool surrounded by willows, ridges, rushes, and tall reeds, to which place Meleager and his comrades, *lecta manus juvenum*, tracked the monster; the placing of the nets, the unleashing of the dogs, the search for foot tracks, the ardour which filled the hearts of the hunters, the sudden rush of the wild boar from the marshy places of the pool, the breaking and crashing of the trees of the wood by the animal's impulse, the shout or "view halloo" of the party as he started off, the casting of javelins, the dispersion of the dogs, the accidents to the hunters, are all most charmingly described by this prince of Latin poets.*

The flesh of the wild boar was held in very high estimation both by the ancient Greeks and Romans. It was the chief dish of a grand Roman supper (*caput cœnæ*), and was often placed whole upon the table. P. Servilius Rullus is said to have introduced this fashion, which in Pliny's time was in use daily. It is alluded to in the well-known lines of Juvenal:—

"Quanta est gula, quæ sibi totos
Ponit apros, animal propter convivia natum."
Sat. i. 140.

"How great is that appetite which places before itself whole boars, animals especially created for banquets."

The wild boars from Umbria, fed on acorns, were in high repute for their excellent flavour, as were those of Lucania and Tuscany. Still there was difference of opinion as to the respective gustatory merits of this animal. Horace says, Laurentine boars were bad which had been fattened on reeds and aquatic plants.

"Nam Laurens malus est, ulvis et arundine pinguis."
Sat. ii. 14, 42.

But Martial speaks of them approvingly. Pliny informs us that the rich Romans kept wild boars in Vivaria. ("Nat. Hist." viii. 78.) The flesh of the wild boar was considered superior to that of the domestic hog, though anything in the shape of pig delighted the eyes of the old Romans. Martial (Ep. viii. 22) is very angry with Gallicus for asking him to dine off wild boar, and setting before him a home-fed pig.

"Invitas ad aprum; ponis mihi, Gallice, porcum,
Hybrida sum, si das, Gallice, verba mihi."

* "Quarterly Review" for October, 1865.

"You invite me to dine on wild boar, Gallicus. You set before me a home-fed pig. I am a mongrel, Gallicus, if you can take me in."

The cooking of a wild boar appears to have been an expensive matter. Martial thus laments his having to return a present of this animal, sent him by his friend Dexter :—

"A wild boar—the consumer of many a Tuscan acorn, and now quite fat with the produce of oak trees, second in fame only to the wild beast of Ætolia—which my friend Dexter piereed with shining spear, lies an envied prey for the fire. May my Penates grow fat on the smell, and my cheerful kitchen blaze with hills of felled timber! but my cook will consume a whole heap of pepper, and will mix Falernian wine in her mysterious sauce. Return to your master, my fire is not large enough for you, O most expensive wild boar! I must be hungry at a less cost." (Ep. vii. 27.)

WANDERINGS IN THE BYE-WAYS OF LONDON.

LIKE the voyager on a vast roaring river, who, toil-worn, runs his bark up some quiet creek or tributary stream for rest and repose, we often turn from the living, rushing stream of headlong bustle, ever flowing through the streets of busy London, to ramble amongst the half-forgotten nooks and eorners to be found scattered here and there in loealities little known, save perhaps to the ubiquitous old-elothes man and the regular explorer. There are other plaees whieh, although better known and more frequented, still have associated with them matters of interest too often unobserved and unreeorded. It is our intention, therefore, to eommunicate from time to time through the eolumns of "Nature and Art" the result of our explorations and researehes. There are few localities where the transition from rattle and turmoil to peace and tranquillity may be more rapidly brought about than in the immediate vicinity of the Temple. As there is said to be but one step from the sublime to the ridiculous, so is there one short lane leading from throngs to solitude ; and as the pert chirping sparrows flit through the spray of the Temple fountain, as it flashes and tinkles pleasantly beneath the trees, or preen their smoke-stained feathers on its brink, it is difficult to realize the faet that one of the most erowded thoroughfares of the town lies little more than a stone's-cast from you.

The old "Knights Templars," from whom the plaee derives its name, no doubt thoroughly appreeiated the advantages which its river-side site eonferred, when they emigrated from the aneient "Preeeptory," long held by them on the south side of Holborn, and which stood where Southampton Buildings now stand ; and it is remarkable that these extraordinary men, the poverty of whose order was once so notorious as to have led them to adopt a seal represenling two men riding on one horse, should have so rapidly, and almost unaceountably, acquired immense wealth and power ; for we find, when they purchased all the tract of land on the banks of the Thames lying between Whitefriars and Essex Street, in the reign of Henry II., they then possessed fifteen thousand manors in their own right. It appears that on taking possession of their newly-aequired estate, they at once caused a splendid building, under the name of *the New Temple*, to be erected, in whiich we learn, "Parliaments and general eouncils were often held, from the halls being so spacious and magnificent." The jewels of the Crown, as well as those of the nobility and families of wealth, were lodged here for security. The Knights Templars, like eertain nations of the earth and the order of Jesuits of the New World, appear to have increased their power and influence until a culminating point being reaehed, their prosperity as rapidly declined as it had grown. We find that on the suppression of the order in 1312, the Temple and all its accessories were granted to Aymer de Valence, earl of Pembroke, by Edward II., in the sixth year of his reign ; but, alas for the mutability of human affairs and the fickleness of royalty ! we find him, two years after, making a grant of the property to his unele, Thomas, earl of Lancaster, who in his turn appears to have derived little benefit from the aceession, as, being eonvicted of politieal offences, it passed from him, and again was taken possession of by the Crown. One "Hugh Despenser, junior," appears shortly afterwards to have had the greater portion of the Temple property granted to him, for life ; but he, like his predeeessor, eould not rest in peace, but was found guilty of treasonable praetices in the reign of Edward III., when, from all the possessions of the Knights Templars having been granted to the Knights of St. John of Jerusalem, by the decree of the Council of Vienne, in 1324, the Temple passed into their hands ; and they, in their turn, for a eonsideration of ten pounds per annum, conveyed it to a body of lawyers, who removed from Thavies Inn, here established themselves, and, as it is needless to say, have since held their own by foree of *the nine points of the law*. Quoting from an old English song—

"King Solomon had temples, with pillars made of brass ;
But our Temples of lawyers all temples surpass ;
For there's brass enough in them to prove Solomon an ass."

So the lawyers having once fairly taken their stand, there was little chance of Templars, or even Saraeens, ever getting them out again ; and it is to be hoped that, even should their shortcomings be only half as numerous as they are popularly represented to be, the daily sight of the beautiful and venerable church of St. Mary, standing elose to the very office doors, will incline them to deal mercifully with their elients. The poet Gay appears to have had at least one faithful friend amongst the

gentlemen of the long robe. Addressing him, he says :—

"Come, Fortiscue, sincere, experienced friend,
Thy briefs, thy deeds, and e'en thy fees suspend;
Come, let us leave the Temple's silent walls—
Me, business to my distant lodging calls.
Through the long Strand together let us stray,
With thee conversing I forget the way."

There is much uncertainty and doubt connected with the *very* early history of this truly ancient church, and there are some curious traditions relating to it. Weever, in his "Funeral Monuments," says :—

"On the credit of 'British Story,' the Temple was originally founded by Dunwallo Mulmntius, as a place of refuge and sanctuary for thieves and offenders, about the year of the world 4748; and Dunwallo himself, with other British kings, is reported to have been buried here."

So much for tradition;—history, and records touching the authenticity of which there can be no reasonable doubt, trace the existence of the building back to a period as early as 1185, at which date it was formally dedicated to the Virgin Mary by Heraclius, patriarch of Jerusalem, who was sent on a mission to this country by Pope Lucius III., in order to induce King Henry II. to accept the throne of Jerusalem, and who, during his visit, was some time a guest of the Knights Templars.

But as we gossip on thus touching the past, we must not altogether lose sight of the present; for there, beside the fountain in which we saw the Temple sparrows practising hydropathy, stand the gardener and his friend, rigidly scrutinizing the depths of the basin, and eagerly pointing out to each other something which they evidently see below. We pass through the iron gateway and join the investigators. What think you is the object of their solicitude?—"The black-gowned form of some briefless barrister who has drowned himself in a fit of despair?"—"some love-lorn fair one, who has sought a long repose amongst the brown autumn leaves floating in the quiet pool?" "lost money?"—"a dead rat?" No; something more lively than any of these—salmon; silvery, glittering salmon, *alive*. There they are, sure enough; juvenile salmon, it is true, but not "baby salmon;" either swimming here and there, resting on the stonework of the fountain's foundation, or poised in mid-water, with winnowing fins and prying eye, in search of insect food. "How came they here?" Simply in this wise. In January, 1865, a gentleman, zealous in the cause of "pisciculture," brought some impregnated ova to the fountain, and, with the assistance of the gardener, of investigating habits, it was put in; but not without an accident causing a general upset of the whole consignment. Cat and sparrow risks stood gloomily in the path to success; but, in due time, the tiny brood came forth and sported gaily in the sunshine, with which even the Temple is sometimes visited. A spring and summer have passed, 1865 has sunk in the great store of expended years, and 1866 will be soon called on to abdicate in favour of a new monarch; yet young *Salmo Salar* still continues to dwell in the Temple fountain, which may now fairly, by the reasoning adopted by honest Fluellen, be placed on an equality with his much-beloved Wye, "as there are salmons in both."

THE WINTER FINE ART EXHIBITIONS.

THE superstitions of art fade as the shadow of its prescriptions. It is no longer essential that exhibitions of pictures should be confided to public bodies, or societies of artists, and it has ceased to be believed that pictures may be only shown to the public in May. Art that itself knows no season—perennial in its bounties—should be perennial in presence too. The old tradition lived long enough. People who are sufficiently unfashionable to attend operas at Christmas or to eat gooseberries all the year round, may well have picture galleries open in November. The taste for art does not hybernate. The three millions of unfashionables who remain in town, are not likely to enjoy the solace of art less when trees are bare, and the outer world is submerged in fog, or for the contrast so presented between the real world and the ideal one represented in art. Good pictures are always enjoyable to people of taste; but never so enjoyable as, when heightening the pleasures of life, they serve to transport even from unpleasant reality to a realm of very happy illusion.

Among the five or six exhibitions of greater or lesser magnitude opened during the past month, the collections of Mr. Gambart, and of the Water Colour Institute, both in Pall Mall, and that of Mr. H. Wallis in Suffolk Street, are chiefly noticeable. Of the last it is barely too much to say that it would by no means in interest or excellence discredit the Royal Academy.

Mr. Gambart is less fortunate in his display than on previous occasions. He has no remarkable picture in his collection, unless, indeed, Mr. Sandys's portrait of Mrs. Rose may claim to be so considered, and very few of the works of the more distinguished contributors do justice to their name or fame. An exception may be probably admitted in the portraits, by Mr. G. F. Watts, of Alfred Tennyson and Robert Browning, alike exquisite in feeling and heroic sentiment, and which may be worthily classed for excellence, though not for size, with the best works of the artist. Mr. Watts is often "*caviare* to the general;" but that the head of the laureate has merits of poetic feeling, ideal elevation, and sentiment, it would be difficult for the most obtuse to deny. Exception might, perhaps, be taken to the artifice of execution, and the lowness of tone in which both these pictures appear, and which last is in apparent simulation of the Venetian manner; but we are content with the result, no matter how attained. Gennaro, a third contribution, is much inferior. Mr. Thos. Faed, R.A., and Mr. Goodall, R.A., are represented respectively by "Music hath Charms," and "Hagar and Ishmael," both works in the artist's most usual and characteristic manner; but of small interest. The first represents a boy playing on a whistle, at a cottage-door; a tall boydenish girl, verging on womanhood, apparently listening to and enjoying the dulcet strains of her brother's pipe. There is nothing either in sentiment or treatment to make this work especially attractive, and in point of fact it is as little interesting as any performance by so distinguished an artist could be.

No exhibition, winter or otherwise, would probably be complete without one of Mr. E. M. Ward's burlesque illustrations of the "Vicar of Wakefield," the "French Revolution," or "Goldsmith's Life." On the present occasion,

we are furnished with a picture of Goldsmith's experiences as a doctor, as set forth in Foster's biography. It is sufficient to say, that it is as exaggerated and unlike the event as it must have happened as it can be. The artist has, with great accuracy, given the doctor purple silk small-clothes, a scarlet roquelaire, and wig, sword, and cane, as described by Mr. Foster; but his art and accuracy have alike ended with this inventorial piece of imagination. Goldsmith looks a mere puppet—a stuffed doll; and the rest of the figures are simply insipid and characterless abstractions. Mr. Val. Prinsep has three works of comparatively small size, of which the best are "Going to Mass," and "Marguerite." These are both able, even powerful, studies, without great character, but marked by considerable vigour of execution, free handling, and a perception of the more subtle requirements of art rarely manifested.

The portrait of Mrs. Rose, by Frederick Sandys, is in point of executive merit a very fine pendent to that of an elder Mrs. Rose painted and exhibited some two or three years ago. Mr. Sandys has evidently, for example, gone to the Augsburg school, and has studied, with no common earnestness, the realism which Holbein, among more familiar exemplars, illustrated so wisely and well. Without any assumption or pretence to that elevation which is manifested in Mr. Watts's Rt. Browning, and which has drawn its inspiration from an Italian soil, Mr. Sandys has attempted, and it may be also said, has achieved, a portrait that would not have discredited Holbein in earnest and literal fidelity, though graced by the resources of modern execution, accessories, and draughtsmanship. The texture painting is a marvel of fidelity; and the lace which adorns the bodice of the dress, the pearls, the satin itself, and the flowers with which the lady trifles, are rendered with an accuracy of colour and verisimilitude that it would be difficult to trace in the works of another modern artist. The hands, moreover, are exquisitively drawn, and are, with the face and neck, not less admirable and natural in colour than the subordinate accessories. Among the more really meritorious works are a landscape, representing, apparently from the local colour, a scene in Cheshire, called "Reflection;" a shepherd with sheep being in the foreground. This is an exceedingly well-painted and natural work, marked by truthfulness and a love of nature. Mr. Goodall's "Hagar and Ishmael" is the sequel on a smaller scale of the large picture exhibited in the Academy this year, and represents the mother at another stage of her journey giving her son water to drink. Mr. J. E. Hicks is represented by a matron teaching a child to walk, called "A Mother's Love;" Mr. Watson, by "The Barber's Shop," "The Tailor," and two others; the first being the best. Mr. Spencer Stanhope gives a scene, or has intended to give a scene, of poachers at a grouse drive, which is doubtless fine, but invisible. But the best of the works of less known artists is "The Breakfast," of Mr. G. A. Storey, representing four little children at their morning meal under the supervision of their governess. Quaintness and simplicity of treatment give considerable value to this picture, and without pretence it may be characterised as a very charming and attractive work.

Mr. Wallis's Collection graces the rooms of the British Artists' Society in Suffolk Street. The superiority of private enterprise in catering for the public could scarcely be better illustrated than here. Walls oftentimes too liberally stocked with mere damaged canvas, are now rich as the gardens of Alcinous in the choicest fruits of pictorial art. The exhibition may be also said to represent the cream of the French and English Continental and insular studios for the year. It includes two works by the great Gerome, one a masterpiece; two by L. Bonnat worthy a place in any exhibition in the world; a replica of the famous picture of the interior of the Bastile, by C. L. Muller; a large work of undeniable merit, "The Return of Columbus," by E. Long; three landscapes, by B. W. Leader, which fairly vindicate the claims of our own school of landscape; two charming cabinet pictures by Meissonier; and several more or less important contributions by R. Ansdell, A.R.A., E. Osborne, F. Pauwels, Marcus Stone, Erskine Nicol, and Auguste Bonheur.

"Calling the Condemned: the Interior of the Bastile," by L. Muller, is a signed replica of the world-famous and often engraved picture in the Luxembourg. To us, this picture is the most complete epitome of the horrors of the Revolution ever achieved. Neither in the pages of Carlyle, in the Memoirs of Madame Campan, nor in the narratives of Michelet, Lamartine, or Louis Blanc, do we gain so clear an insight into the misery and horrors of the Directory, of the excesses of the Jacobins—the long sad story of suspense and cruelty, suffering, and slaughter—as this scene of the condemned in the Bastile. The *soi-disant* minister of justice steps forward and calls the names of the victims, who cower and attempt to conceal themselves, or hide their identity by mingling in the crowd. Through the open door there is a glimpse of heaven's sun, and of the wretches struggling with gaolers and their fate. One figure of a Girondist, seated sad and contemplative in the foreground, is in itself a poem, in its despair, calm, and isolation. The work of which this is a transcript is one which reconciles us to the mission and services of art in an age of mediocrity, in which so much of its purpose is lost or misunderstood. Of the two pictures contributed by Gerome, "The Marchand d'Habits" is the finer and more important, and is in finish of execution, simple realism, and verisimilitude, equal to any work he has ever exhibited. An Arab bandit, a true son of the desert, is cheapening a Damascus blade, which he is purchasing from a Jew salesman. He is examining the weapon with a workmanlike air, as one to whom good steel is of priceless value, and as jealous of its smallest flaw; some of his companions, eager in speech and zealous of advice, crowd round him; and the Jew, by voice and gesture, deprecates the disparagement of the would-be purchaser. The men, the dresses, and the architecture, are all Eastern, and the scene might be laid in Damascus itself. There is, moreover, about the whole picture, an air of reality that asserts the resources of the artist and the very purpose and province of art; and seems to suggest a glimpse into the life and character it represents, rather than the simulation of a mere painting.

H. Merle is represented by a picture of "Marguerite trying on her Jewels," which lays claim to especial merit of colour and conception; but is somewhat more formal and statuesque than pictorial. Marguerite, perhaps a little too girlish, is exquisite in expression and sentiment, and the old woman her companion is portrayed with admirable dramatic feeling. The Mephistopheles, represented in the background, though rendered in the traditional manner, is powerfully painted; and the whole picture, without being an entire success, is a masterpiece of art, and narrowly escapes such entire perfection as would have made it a world-famous illustration of the world-reputed poem. The hands are well drawn; the flesh is admirable in colour; the execution, without being vigorous, is accurate and free; and the management of the background is marked by considerable skill, both in colour and composition. A large work, life size, "St. Vincent de Paul taking the Place of the Galley-slave," and "Neapolitan Peasants before the Farnese Palace at Rome," by L. Bonnat, are compositions of the highest possible merit in their respective manners. They are both freely handled, and are marked by a vigour and dash of execution, a technical skill, and mastery of colour and material of the most daring kind. The large picture is as vigorously drawn as if by Rubens himself; free and bold, in colour and technic skill not unlike Velasquez, and the story it tells is most vividly expressed. The smaller work, scant in material, is an illustration of the power of handling and treatment to compensate for paucity of subject. A few peasants bathing in an Italian sun, before the door of a palace, which recalls every association of magnificence and wealth,—that is the story; but the scene is photographic in accuracy, and superadds the charm of colour and of character to its air of literal fidelity.

The works already specified mark the Continental school, which is further represented by a fine historic composition, by F. Pauwels, of Ghent, with a representation of a religious ceremony restoring the orphan children of Lierven Pyn, chief

minister of Ghent, to the honours and social position of which their father had been deprived by the malice of his enemies; by an indifferent picture of a Highland shepherd—a very theatrical Highlander indeed—by Rosa Bonheur; and by contributions by Tenkate, Schlessinger, W. Bougereau, Victor Chavet, H. Koekkoek, Verboeckhoven, C. Bisschop, Béranger, and H. Frere. Among the more noticeable English works are "Sir Hudibras and Ralpho in the Stocks," by J. Pettie, A.R.A; a "Fine Naval Scene," by H. Dawson, junior, representing the Lords of the Admiralty visiting Sheerness; and contributions by Richardson, Creswick, Cooper, Dodgson, and other well-known artists.

Among the landscapes, three, "Morning and Evening on the Ledr," by Leader, may be noted as falling little short, in atmosphere, treatment of water, aërial perspective and fidelity, of the works of the greatest landscapists. The last, the finest work, is as perfect in its representation of still water—a difficulty ordinarily with artists—as can well be conceived. Mr. Marcus Stone is represented by a picture of "Royalists seeking Refuge in the House of a Puritan," rather thin, yet marked by true refinement of feeling; and Mr. G. D. Leslie has several works of great excellence and finish. In a collection so large—numbering nearly five hundred pictures and drawings—it is impossible in one brief notice to do justice, especially where all the works appear to have gone through the crucible of taste, and to have been selected with much more than ordinary skill and discrimination. Two very conspicuous and most successful pictures by Mr. E. Long, and two or three sketches by Mr. E. Nicol, in his usual manner; with works by Dobson, P. F. Poole, Faed, and artists not less eminent, are passed from lack of space, but with a most complete recognition of their merit.

The Institute of Painters in Water Colours has opened its usual winter exhibition, and Messrs. Rowbotham, Campion, and Hayes, are, as heretofore, its largest contributors. Among the associate members, Messrs. Guido Bach, Chas. Cattermole, J. M. Jopling, and R. Richardson figure strongly; but the collection is by no means striking in interest or artistically attractive by virtue either of *matériel* or treatment.

Of the more conspicuous works are two large studies, "The Interior of an Artist's Studio," by L. Haghe, representing the same room from different points of view, and under varied aspects of light. The studio is full as a curiosity shop of all the *bric-a-brac* accessories of modern art. Armour, carved oak furniture, vases, flowers, guitars, easels, lay figures, tapestry, damask hangings, &c. These paraphernalia, as might be assumed, are admirably rendered; but we cannot help condemning the waste of ingenuity displayed in the treatment and representation of so uninteresting a shrine. A studio is but a studio, and the same skill employed might have perpetuated with equal success the interior of some grand cathedral, or Mediæval hall in Flanders or Italy, which would have lent additional value to the artist's execution, and graced his labours by grateful recompense of intrinsic interest. As a mere study the pictures are admirably painted with great care, and the artist's characteristic technic ability.

Mr. Hine, so at home among boats and Brighton fishermen, and who seems "native and to the manner born" when his theme is the sea, contributes again sketches of his favourite subjects; but has also tried "fresh woods and pastures new." He represents us with some sketches in the neighbourhood of Swanage and Eastbourne. These are rendered with his usual care and skill, and one "near Swanage," a little more ambitious than ordinary, is marked by great purity of colour, and is more than moderately successful. Mr. Rowbotham shines as of yore in his calm lake scenes, and in those Italian views in which blue water, vines, feluccas, and Italian peasants seem so essential an element. Mr. Rowbotham is nothing if not pretty, and is on the present occasion both pretty and vapid; but he offers two or three views less mannered, and therefore more interesting than usual. M. Carl Werner's Eastern scenes are by no means unfamiliar; but his sketches on the present occasion are marked by more finish, and have less bravura of manner than former essays of the same kind. "Interior of a Bath at Damascus," "An Antique Gateway," and "A Tailor's Shop at Cairo," are among the studies, and of these the last is certainly the best.

Mr. D. H. MacKewan, Aaron Penley, and J. W. Whymper, stand among the foremost representatives of landscape; and Mr. Penley's "Buttermere Lake, Cumberland," painted on the spot, may be cited as one of the most honest and vivid drawings from nature, and perhaps the most wholly meritorious work, in the collection. It is characterized by the most fastidious realisim and purity of treatment, and is calm and serene as nature's self. The water is expressed without affectation or trick, and the local character of the hills which shut in the mere, are most authentically preserved. A scene in Wales, by the same artist, called Llyn y Cwm-Fynnon, near the Llanberis pass, is a similarly faithful transcript of native scenery, broad in its handling, accurate, and unaffected, and yet indicating that artistic discrimination which Fuseli has asserted to be the imagination of the landscapist.

Mr. Campion displays extreme versatility in his essays, and presents us with marine views, sketches of military trains, architectural vistas, coast scenes, and studies of figures, all drawn with more or less freedom and vigour, but of very varying excellence. Of the two which hang just within the doorway, No. 19, "Boat pushing off," is by far the best; being free and spirited in composition, good in treatment, and tolerably *vraisemblable*. Mr. W. W. Deane, whose works are always welcomed with pleasure, is not so strongly represented as he has been, but has one or two drawings expressive of his artistic care and fastidious feeling. Mr. Harrison Weir sends five or six frames of small sketches, and drawings of birds, a lion, pigeons, and dogs. The last is especially excellent; the animals represented are admirably contrasted, most effective in *pose*, drawn with great anatomical care and skill, and instinct with life and *verve*.

Among the other contributors who may be pleasantly remembered are Mr. W. Telbin, Skinner Prout, James Fahey, Henry Warren, and E. Richardson. Mrs. Wm. Duffield may be especially recalled with admiration and pleasure, as presenting some out-of-door studies of heath in flower, which have never been surpassed for delicacy of colour, truth, and patient—even loving—tenderness of delineation.

Among the other Art Memoranda of the month, the sale of three or four valuable pictures at Mr. Gurney's, in St. James's Square, and of the celebrated "Black Wedgwood," of Mr. Thomas De la Rue, may be recorded. Among Mr. Gurney's pictures were the very fine portrait of Gondomar, the Spanish ambassador to the court of James I. and the enemy of Sir Walter Raleigh; a Holbein of Henry VIII. in an imperfect state; and an authentic-looking portrait, artist unknown, of Henry VII. The rest of the collection included some modern pictures of no especial merit, and a very fair example of Vandyek in portraiture; but was not otherwise remarkable.

Mr. De la Rue's china—sold at Christie & Manson's from the 12th to the 20th inst., inclusive—comprised, perhaps, the largest collection of Black Wedgwood that has yet fallen into the hands of any single person, and some of the very finest examples of the great potter's art. The collection also included a vast number of articles in the well-known blue and white wares, with one or two in white and sago green; but was greatly inferior in this respect to that of Mr. Mayer, the well-known collector at Liverpool. The examples of black ware were some of them of large size, and included busts and statuettes so large, sharp, and ornate, as to create surprise that such works could have passed through the furnace. Among the more remarkable of these were a life-sized bust of De Witt, some 25 inches high, exquisitely sharp in its delineation, and modelled with great anatomic skill; a bust of Seneca, also life-size, and nowise inferior in executive excellence, as well as being of classic simplicity and design; and a statuette, after the antique of a sleeping boy, about 15 inches in length. The detail and modelling of this figure are probably equal to

anything ever attained by the potter's art; and it would be difficult indeed to imagine it other than a piece of sculpture. A longitudinal plaque or tablet, about 20 inches in length, containing a complex group of figures in bas-relief, was also one of the distinguishing items. The design represents the burial of a Roman soldier; and the work derives additional value from the fidelity with which the arms, dresses, and insignia have been studied. The dead soldier is borne in the arms of his comrades, under the command of a centurion; and it is not impossible that the antique design, from which the Wedgwood plate has been copied, served as a model or suggestion for the mediæval painters. The execution of the very elaborate minutiæ of drapery, of the various heads, the armour, the arabesques of the shields, breast-plates, helmets, &c., is exceedingly fine, and in the best taste that the ceramic art may attain. Among the other busts were those of Voltaire and Rousseau, Locke, Grotius, Epicurus (life size), Spenser, Bacon, Ben Jonson, and Cicero. The white and blue ware included medallions of varying shape and design, and a vast number of oviform and other vases, among them some of the famous pattern which has satyr-shaped handles and is ornamented with classic medallions and festoons of flowers.

Some of the medallions, white on blue ground, were remarkable as being portraits of men celebrated in their day, but whose names have almost dropped into oblivion. Among these were the mad sailor-lord, Lord Camelford, who was killed in a duel early in the century; Philip Egalité, the hero and victim of the French Revolution and friend of Cagliostro; Sir W. Hamilton; Warren Hastings, &c. The miscellaneous items of art and *bijouterie* comprehended ivories, camei, Poniatowski gems, Gris de Flandres ware, Sèvres china, antique porcelain, and some few bronzes; but neither of these were exceptionally remarkable for quality or taste.

MUSIC AT HOME.

THE operatic swan at Her Majesty's Theatre is an unconscionable time dying. Formerly the Italians came in with the easterly winds of March and April, and went out when sturdy August reapers commenced bending to their work in a thousand English corn-fields. We have changed all that, and the march of musical intellect ignores precedent as completely as it despises conventionality. The song-birds of Southern Europe are no longer in the majority, nor do they herald the summer, but, together with the mixed nationalities of Germany, France, and England, warble their griefs and declaim their revenge while the autumnal equinoctials are howling round the coasts. As for the laws and customs regulating the beginning and end of opera seasons, one may consider them overturned by the Maplesonian lever, for a delightful uncertainty now prevails regarding "last nights." Credulous people doubtless imagined they had seen the final bouquet of 1866 thrown on August the 18th; but that cry of exultation peculiar to Christmas time, "Here we are again," might well be sung in sonorous unison by the vocal strength of the company again assembled in the lyric theatre. Mr. Mapleson has, within a few weeks, made two bold moves upon the chequered board occupied by himself and his amiable brother manager of Covent Garden. In the first place, the giant Tradition is overthrown, for, contemporary with the waning November festival of Guy Fawkes, and that kindred but more elaborate exhibition, the Lord Mayor's show, we have Italian opera. The remaining achievement is the destruction of the proscenium boxes, which genteel apartments were "cells" in more than one sense. From them suffering humanity could see little more than the crowns of the singers' heads, and could hear but imperfectly at the best. Stage room is an object nowadays, and though the largest horse-shoe in Europe may have lost something of its proportions, Mr. Telbin will bless the day that saw the last of these boxes. Speaking in carpentering phraseology, the proscenium is by no means "square." The sides lean outwards; but that was entirely unavoidable, and is, after all, a matter of small moment compared with the advantage gained. The autumn "farewells" were inaugurated on November 3rd, by a performance of Gounod's *Faust*, with its Mephistophelian miracles of sword-breaking and flaming wine; its grand point when Valentine and his friends scare the malicious fiend with their cross-hilted weapons; its tremulous and passionate love scene; the piteous wailings of despair, which follow when Marguerite tries to pray before the church; and her burst of devotion as the curtain falls. Mdlle. Titiens, wearer of the lyric crown, and chief pillar of the state wherever she appears, cannot look the tender girlish Marguerite according to Retsch's, or any other artist's outlines, but she can read the character and sing the music to absolute perfection. A slight-figured supple girl of fifteen or sixteen would, as regards personal appearance, realize Shakespeare's Juliet better than a full-grown woman of riper years; but put blooming adolescence into the character, and what becomes of the poet's language? In the musical, as in the ordinary drama, the rule holds good that time alone can give the experience necessary for the perfect rendering of this or that heroine. Under this dispensation, we must be content very rarely to enjoy instances of complete and thorough dramatic illusion. Mdlle. Titiens is, in her way, a genius as far superior to the generality of *prime donne* as Mont Blanc is higher than Shooter's Hill.

A superb voice is an excellent thing in woman, and when allied to an intellect which can grasp the full meaning of such composers as Beethoven, Mozart, Glück, Cherubini, and others, the effect becomes doubly impressive. This is precisely what Mdlle. Titiens can do. She can discover and appreciate the grandeur of such parts as Leonora, Donna Anna, Iphigenia, and, last, but far from least, Medea; and she is blessed with a physical strength which enables her to realize them with a force oftentimes terrible and overwhelming.

Versatility is an attribute of all true artists, and the great Hungarian's claim to this distinction is beyond all dispute. Those who have seen the tiger-like ferocity of her Medea, and the pleading tenderness of the gentle Marguerite, will assuredly acknowledge Mdlle. Titiens' power in delineating exactly opposite tones of feeling. The *prima donna*, now the mainstay of Her Majesty's Theatre, has attained the highest position in the operatic world; and none but an artist of the noblest acquirements could have stepped, with such an increase of fame, from Verdi's to Beethoven's Leonora, or from Flotow's Lady Enrichetta to Mozart's Donna Anna.

Even as the English Mrs. and Miss are exchanged for Madame and Mdlle., so the Parisian, when he reaches the capital of the shopkeeping nation, forswears his proper prefix, and calls himself Signor. A certain noble duke, when his parish clergyman invited him to "pray for rain," assented to the proposition, but added, "It's no use, though, while the wind is in this quarter." In like manner let M. Morin, the original Faust of the Lyrique, by all means rechristen himself *Signor Morini*; "though it's no use," while his style is so thoroughly and intensely French. We have had better representatives of the revivified Doctor in unmusical England; nevertheless the new tenor is an acquisition to the theatre. His voice is powerful, and his intonation true. A *tenore robusto* is seldom more than respectable in sentimental passages, and Signor Morini is no exception to the rule. He hurls defiance at operatic oppressors better than he makes love; in point of fact, "Di quella pira," and similar specimens of vocal energy, are evidently more in his way than songs of such rapturous tenderness as "Salve! Dinorah." This may not be the opinion of the "lively" Parisians; but it will probably be the conclusion arrived at

by phlegmatic Londoners, who, as a sarcastic Gaul once observed, "have no ripe fruit at command but 'baked apples;'" who are illuminated by a sun as dull as a red wafer; and who habitually avoid the inevitable fogs by various ingenuities in self-slaughter. Pollio—that Roman pro-consul, so heartily despised by the sympathetic public, and so thoroughly hated by all tenors—was the Signor's second; and Rodolfo, in *Der Freischutz*, his third character. In the latter he was simply out of place, but in Manrico the case was reversed. His Basilio in the immortal *Nozze di Figaro*, given on 10th November, is an admirable performance. Signor Morini is not so dull and lifeless as the Basilio at the Royal Italian Opera; while, by abstaining from exaggeration, he shows himself wiser in his generation than his predecessor here. He is really a happy medium between the two Italians, and (spiritually speaking) between Mozart in the Elysian, and the British public in what was once St. Martin's Fields. The new Cherubino, Mdlle. Wiziak, is overweighted in the part. She is very young, and has a clear, fresh voice; but as yet is neither the actress nor singer to realize Mozart's amorous little "knave of hearts." Signor Foli, good as a vocalist, and indifferent, to say the least, as an actor, played Bartolo in place of Signor Bassi. The great ones of the east were all old friends. That mysterious moral pressure known as "general desire" necessitated a morning performance on the 14th of the month. It was rendered memorable by Mr. Santley's perfectly safe descent from master to man—from Don Giovanni to Leporello. As a genuine comic performance, it is equal to his *Papageno*, and this is saying much.

Mr. Tully was to be pitied for being called upon to select, arrange, pervert, and convert music to that sermon in five acts, the *Faust* of Drury Lane. Gounod not being available, the musical director naturally bethought him of Louis Spohr's *Faust*, which was found too heavy for the subscribers of the Royal Italian Opera. Mr. Tully, moreover, raked from the ashes of the past a few not very interesting fragments by Sir Henry Bishop. These musical illustrations to an adaptation of Goethe's play, brought out at this theatre in 1826, could never have procured for Sir Henry his complimentary appellation, "the English Mozart." Mendelssohn is the third, and Weber the fourth composer pressed into this service. The four musicians have nothing in common; and in the *pasticcio* compiled from their works there is exactly the unsatisfactory effect that was to be anticipated. All Spohr would have been too rich and heavy, and all Bishop decidedly too light and unsatisfying; therefore did the Drury Lane conductor select from both, and attempt to leaven the incongruous mass with Mendelssohn's superb chorus, "Lo, what crowding, whirling, crushing!" from the *Walpurgisnacht*. Great composer as Spohr was, and as Mendelssohn considered him, he loses by comparisons of this kind. The grand old Capellmeister's opera is principally made use of. The overture (one of his best), two choruses of witches, one of students, the Festival Chorus and Polonaise, and the twilight song in G Minor, were pressed into the service. One of Mr. Tully's choral conversions is that of a trio for equal voices into a choral "Hymn to the Virgin." Poor Sir Henry's intentions are likewise flouted by a certain song made popular by Miss Stephens, the Marguerite of 1826, being transformed into a "Chorus of Seraphs." Miss Poole sings the romance in G Minor; and Mr. W. Harrison appears as Valentine, "with a song," as they used to say in ancient playbills. The song is Weber's, from *Euryanthe*, and Mr. Harrison sings it as tunefully as he can, and finds the complacent public still kind and compassionate. The choral and instrumental music, considering that Drury Lane is not an operatic theatre, is very creditably performed.

Saturday is once more an interesting day at the Sydenham Academy of the Fine Arts, otherwise the "People's Palace." The leaves are off the oak, elm, and chestnut trees in the Company's garden, and the winter concerts are "on" in the Company's music-room, which, by the way, requires to be enlarged. Mr. Manns will reign supreme until forced to abdicate in favour of Christmas festivities, when pantomime in the transept is found remunerative, and the nave is transformed into a huge bazaar of cheap toys, equally inexpensive jewellery, and sweetmeats at very reasonable prices. The winter concerts are peculiar, and the distinctive marks of which they can boast receive full acknowledgment from amateurs. Even at the concerts of the most celebrated London musical societies something very like monotony is the rule. Neither of the Philharmonics can be deemed so comprehensive in its scheme of action, nor so effectual in diffusing a knowledge of art in its varied branches, as these admirably chosen entertainments. Conservatism in music is a principle we all honour, and standard Symphonies are always welcome to, or, in point of fact, demanded by, English connoisseurs. We must have the Pastoral and C Minor of Beethoven, the "Jupiter" and E flat of Mozart, and the "Italian" of Mendelssohn. These luxuries are conceded; and at the same time are forthcoming less generally known works of the same class by the above composers. Musical Tories will not give up their revered "Papa Haydn," with his gems of clear and unaffected melody in their simple and elegant setting. The grand old father of Symphony shares places of honour with his stalwart sons; and the strong prejudices of obstinate Britons are studiously respected by Augustus Manns, a real enthusiast, a thorough musician, and one of the most hard-working disciples of art in the Queen's dominions. Hero-worship is uncongenial to many, but to recognize conscientious efforts for the advancement of music and the cultivation of pure taste is both a privilege and a pleasure. The originator and conductor of these concerts chooses a hard and difficult path; but in working out his mission so perseveringly, he gains the respect, esteem, and confidence of all those capable of discriminating between good music and a vulgar commonplace substitute. The multitude are doubtless content to refresh themselves at somewhat turgid streams of melody, but by persuasion they may be led upwards towards that sparkling fountain into which the fabled Orpheus perhaps dipped his lute.

In addition to the performance of standard works, well—and not so well—known, the winter concerts are distinguished by the constant production of absolute novelties, not as regards the recent date of their birth, but in that refreshing sense of never having been previously given in this country. Mr. Manns can point to a voluminous list of symphonies, overtures, and other compositions, which have been heard for the first time in the Sydenham music-room. Modern Germany is frequently represented, and this season a certain prominence has been given to Robert Schumann, a genius beyond all doubt, and one of the most independent composers the world has yet seen. No one would suspect Mr. Manns of being a thorough believer in the "music of the future"—a Wagnerite, for instance; but that he has a deep sympathy with Schumann's compositions is evident. Three of his symphonies—No. 1 in B flat, No. 2 in C Major, and No. 4 in D Minor—are now familiar to the Saturday public. In one of the interesting programme-notes signed A. M., the representative of those initials predicts that, when Schumann's music is "known" in England, it will as a natural consequence be "loved." The signs of the times hardly point to that sanguine conclusion, and the probability is that, ere the composer is thoroughly loved in this country, Mr. Manns will have attained a patriarchal age second only to that of Methusaleh. We should "love" Schumann as we love the old classics, if we could always follow him as easily. It is not our fault that poor Robert Schumann wrote such wild and wayward music; that his lovely subjects are, as a rule, held up and thrown away again before we have time to revel in their beauty; that continuity is so seldom and confusion so frequently forthcoming; and that the marvellously rich stores of his knowledge were so often directed into tortuous paths whither ordinary perceptions cannot follow him. There is no disguising the fact that a certain degree of weariness is ordinarily felt by the majority of those who listen attentively to Schumann's symphonies. The Scherzo in the "C Major" every one must "love," because they can follow it as perfectly as any ever written. Scherzos, as a matter of course, give composers less opportunity of becoming vague and indefinite than other movements, but the change here from obscurity to distinctness is refreshing as that from "black letter" to gigantic "posters." Mr. Manns

turns occasionally to the rescue of the hitherto much neglected Franz Schubert. A notable instance of this service to the cause of good music was the production of an *entr' acte* in B Minor, another in B flat Major, and a romance for *mezzo-soprano*, from the music to the drama of *Rosamunde*. Mdlle. Enequist (who made her *début* in England at the winter concerts some seasons back) sang the romance, which was encored. Anything more gracefully and tenderly melodious than the second of these *entr' actes* was never imagined, and the three pieces were received with enthusiastic expressions of applause not often indulged in by the undemonstrative visitors. For *Rosamunde*, Schubert also wrote three choruses and some ballet music, but it is unfortunately lost. The winter concerts are as essentially instrumental, and valuable schools of art, as those held in the transept during the summer months are essentially vocal, and unserviceable, except to form a point of concentration for a crowd of extravagantly-dressed people, who care not what they hear, so that they find themselves before the fashionable singers of the season. The winter concerts are for students, amateurs, and those to whom music is an absorbing delight; and the summer meetings suit to perfection others with whom music aforesaid is a mere fashion and a preliminary to that extraordinary institution, the Promenade. The orchestra of the Crystal Palace is faultless, and this season has been considerably augmented. The present series commenced on October 6th.

Mr. Arthur Chappell finds St. James's Hall a counterpart of that productive field described, in the juvenile legend, as "Tom Tiddler's Ground." He commenced that satisfactory employment of picking up gold and silver on November 5th, the first night of the Monday Popular Concerts, ninth season. Herr Straus, Herr Louis Ries, Mr. H. Blagrove, and Signor Piatti, formed the quartet party. Madame Arabella Goddard was the *pianiste*, and Mr. Santley the vocalist. Herr Straus (who was heard for the first time at the Crystal Palace Concerts) played Bach's Prelude, and Fugue in G Minor.

At Covent Garden, Mr. Alfred Mellon, after nobly upholding the banner of legitimacy, has condescended to hoist the flaunting rag of "sensation." Many have hitherto looked upon the English conductor as one who did his best to stem this torrent which overwhelms music as well as the drama; and such persons will assuredly regret he did not continue the struggle.

This may or may not have been the first time such effects were allied to high-class music; but the exhibition made on the singularly appropriate evening of Guy Fawkes-day was not complimentary to Weber and his *Der Freischütz*. The first surprise awaiting the public was a programme made out in orthodox theatrical form, as follows:—Zamiel by Mr. Winterbottom; Caspar by Mr. Hughes; Rodolph by Mr. Reynolds; Evil Spirits by Messrs. Hawkes, Antoine, and W. Winterbottom; Phantom Stags by the band of the Coldstream Guards; Charmed Bullets by Mr. Horton; Distant Thunder, &c. &c., by Mr. Seymour. This "good cast for a piece," as the facetious Barnard hath it, was, however, incomplete. Why not Agatha, Mr. Brown, and Anna, Mr. Jones? The programme-framer judiciously stopped when he came to the ladies; but this is as much of a compromise as most sensational contrivances; for "Softly sighs the voice of evening," and "If a youth," are both sung by female characters in the opera, and are both played by masculines in the orchestra. As the incantation approaches, a bell is heard "behind the arras," like the groan of the perforated Polonius; and an invisible Mellonian minion turns down the gas throughout the theatre. The blood of the audience does not, however, run cold enough yet, and to honour Weber still further, a scientific Jupiter in the orchestra dispenses magnesium lightning, which turns Mr. Mellon, Rodolph, Caspar, Zamiel, Messieurs the Evil Spirits and Phantom Stags, the bullets, and, strange to say, the thunder, quite blue. The gaslight, and with it confidence among the audience, is eventually restored, as the Huntsman's Chorus concludes this selection—extremely well put together by Mr. Mellon, but rendered amazingly absurd by such embellishments. The power which is, or those that be, may possibly feel inclined to accept suggestions for the furtherance of "realism" misapplied to operatic selections. Why not have had the soloists down in the front, and in costume? Mr. Winterbottom as Zamiel, crimson to the bassoon; Mr. Hughes as Caspar, in his shirt sleeves and forester's tights; the Phantom Stags in property antlers, instead of Coldstream shakos; Mr. Brown as Agatha, in petticoats and long plaited back hair, and Mr. Jones as Anna, similarly adorned? Mr. Mellon has done much—very much—for good music in his "classical nights" throughout the season, and has worked hard to deserve public support; but this is an experiment he will not surely repeat. Let us hope the Phœnix will not rise next season from the ashes of that sensational bonfire lighted at Covent Garden on the 5th of November. Mdlle. Carlotta Patti left the theatre on the 3rd of the month, and is gone haply to show provincials or foreigners how to sing English ballads. What was meant by the ruminative scream commencing the second verse of Mr. Mellon's unfortunate composition, "Cupid's eyes," posterity must determine. Until the mystery is explained, those who are not idiotic enough to applaud what looks like a miserable, senseless, inartistic trick, may question the propriety of any such devices. Mdlle. Fanny Jervis, a young *pianiste* of most refined taste, and with the specialty of a delightfully liquid touch, made a most promising first appearance on Monday, the 1st of October.

The enterprising Mr. Mapleson, so say several of rumour's tongues, has bought his way into the vacant space where Miss Linwood's Leicester-square Gallery once stood. He is supposed to contemplate building a theatre which shall cost £100,000, and is supposed, moreover, to have secured the services of Mr. E. A. Solomons, architect of the New Prince of Wales's Theatre at Liverpool, and the Prince's, at Manchester. We are bound to add that the report obtains but scant credit.

MUSIC ABROAD.

AT Vienna the principal musical event lately has been the grand concert got up for the benefit of the widows and orphans of those Austrian soldiers who fell in the late war. The presiding genius on the occasion was Herr Herbeck, the celebrated *Capellmeister*. The executants were the members of the Vienna Association for Male Voices, and those of most of the other Associations of the same description in the Austrian capital, assisted by the bands of the two infantry regiments, named after the Grand Duke Franz Ferdinand d'Este and Count Kehvenhüller, respectively. The concert-hall was the building known as the Winter Riding School, fitted up expressly for the occasion. As might have been foretold, the attendance was something extraordinary. Every nook and corner was full, and in the Emperor's box were nearly all the princes of the Imperial Family, together with a great many other princes, from "foreign parts," now stopping in Vienna. At least four thousand persons were in the audience part of the edifice, while above twelve hundred vocalists occupied that devoted to those who took an active share in the proceedings. The programme consisted of justly popular choral compositions, but it was not these which had attracted the vast assembly so much as the desire to alleviate in some degree the sufferings of those whose husbands and fathers had sacrificed their lives for their country. Indeed, the alacrity, nay, the feverish anxiety, with which the public has come forward all over Germany to advance the sacred cause of charity is something deserving of the highest praise.

One of the latest additions to the company at the Imperial Opera-house is Fräulein Aglaja Orgeny, for a time attached

to the Royal Italian Opera, Covent Garden. She became a favourite with the patrons of Mr. Gye, but she has not been so fortunate as to please the Viennese public much. Her arrival had been heralded by paragraphs in the papers to the effect that she had quitted the Royal Opera-house, Berlin, from patriotic motives. Being the daughter of an Austrian officer, she had refused to take part in the performance got up to celebrate the victories of the Prussian armies. The public, however, have chosen to judge her by her vocal abilities, rather than by her patrotic sentiments, and their verdict has not been as favourable as it might have been. She appeared as Amina in *La Sonnambula*, and as Margarethe in Gounod's *Faust*, and the general opinion appears to be that she is better fitted for the concert-room than the stage. True that in *La Sonnambula*, a too lavish use of black colour round her eyes gave her a most ludicrous appearance as she rose from the couch in the Count's apartment, causing a titter to run through the house, rendering her nervous, and completely spoiling the finale of the second act. True, also, that she was suffering from the effects of recent indisposition when she sang in *Faust*. Still, if we make every allowance for these two *contretemps*, Fräulein Orgeny's prospects in Vienna are not the most brilliant.—— Hérold's opera of *Zampa* has been revived, but is not likely to remain long in the bills. The subject does not attract as it used to do when the famous tenors, Wild and Erl, sustained the part of the hero. The public, like Sir Charles Coldstream, are rather "used up." They do not take the same interest as formerly in pirates and such small deer. Since Meyerbeer caused a cemetery full of nuns to rise from their graves and dance about the stage, and Herr Richard Wagner treated his audience to choruses of phantom sailors, one poor ghost has but a bad chance.—— The Baroness Pasqualati, a lady highly esteemed in the higher circles, has opened the Harmonie Theatre. Her programme includes light operettas. The first specimen she presented to her patrons on the opening night was a triflo entitled *Der galante Candidat*, founded on the French piece *L'Abbé galant*. The music, by Conradin, contains several numbers distinguished for their freshness and originality. The applause at the fall of the curtain was general.

One effect of the war upon art in Germany has been that the theatres at Cassel, Wiesbaden, Frankfort, and Hanover, have become Prussian Theatres Royal, with a subvention from the Prussian government; which latter, in a pecuniary view, will probably be no great loser by the transaction; for, if the attendance should happen to fall off at any of the above establishments, Herr von Hülsen, the Intendant-General of the Theatres Royal, Berlin, has merely to send a "star" or two from head-quarters to Cassel, Wiesbaden, Hanover, or Frankfort, as the case may be, and the public will again flock to the comparatively deserted edifices. Meanwhile, Herr Niemann, one of the best tenors in Germany, has taken advantage of the new state of things which annulled his contract with the management of the ex-king of Hanover, to conclude an engagement with that of the Royal Opera-house, Berlin, where he will prove a great acquisition, and share with Herr Wachtel the first tenor parts. There is plenty for both to do; the programme having been more varied this season than any previous one. For instance, among the operas performed since the Royal Opera re-opened its doors, may be mentioned *La Dame Blanche*, *Guillaume Tell*, *Il Trovatore*, *Tannhäuser*, *Les deux Journées*, *Joseph in Egypten*, *Faust*, *Le Postillon de Longjumeau*, *Fra Diavolo*, *Robert le Diable*, *L'Africaine*, *Rienzi*, *Les Huguenots*, *Czaar und Zimmermann*, *Le Prophète*, and several more besides. Most certainly the greatest *fanatico per la musica* cannot complain either of the quantity or the quality of what is offered him by the Royal Opera-house, Berlin. The company, too, is excellent, counting among its members many artists not only of German but also of European celebrity, and many more, who if not quite so famous, might almost lay claim to be so. It must, moreover, be borne in mind that the performance of opera is not limited to the Royal Opera-house. Operas are given, and in good style, too, at Kroll's theatre, at the Wilhelmstadt theatre, and at the Victoria theatre. Not a season passes, either, without an Italian company paying a visit to the banks of the Spree, though there is no regular Italian *troupe*, as is the case in London, Paris, and Vienna. This is the only particular in which Berlin is behind the three other great European capitals named. It will have been seen that the operas cited above are all well-known works. The only absolute operatic novelty produced at Berlin lately, is one in the shape of a three-act musical farce; words and music by Herr Adolph Larronge. The music is exceedingly original and clever.

A gentleman who has greatly contributed towards propagating among the Berliners a taste for music of a high class, lately celebrated the 25th anniversary of the concerts established by him—that gentleman is Herr Liebig. The concert he gave on the occasion in question attracted around him troops of friends and admirers anxious to testify their gratitude for what he has done in forwarding the interests of art. Herr Liebig deserves all the honours shown him. Thirty years ago, anything like good musical entertainments—leaving out of consideration the Opera—was scarcely to be found in Berlin. The principal "entertainments" of this kind were the concerts given in the gardens attached to the suburban coffee-houses, and such like localities. The performers consisted of some half dozen wretched fiddlers. The sole exceptions were the concerts of the military bands, and even they were not what they now are. It was not till Johann Strauss, the Walz-King, as he was termed, had visited the Prussian capital with his orchestra, and shown the public in the concert-room of the Theatre Royal, for six shillings a head, how dance-music should be played, that better days began to dawn in Berlin for this kind of composition. But it was not long ere, in Gungl's and in Kroll's, Berlin could boast of possessing orchestras not a whit inferior to Strauss's. Herr Liebig, too, when founding his concerts, assigned a prominent position to dance-music. It was only little by little that he introduced classical music into his programmes. But the classical element soon ousted every other, as easily and as naturally as the young cuckoo drives the smaller fledglings from the nest into which he has been dropped, in the form of an egg, by the parent bird. Herr Liebig was no less anxious to improve his band than to elevate the character of his entertainment. He was fortunate enough to secure the performers he required. This enabled him to offer the public, not merely the very highest and most classical works, but to do so in a style inferior only to that of the Royal Orchestra itself, if indeed inferior to that. Of all the various orchestras in Berlin, there can at any rate be no doubt that Herr Liebig's stands next to the Royal Orchestra, and on all grand occasions its services are secured by the Singacademie and Stern's Association. The public have not been backward in doing justice to Herr Liebig's exertions; and the popularity of his concerts has increased so greatly that he gives one somewhere or other in Berlin nearly every day. It is easy to understand what a beneficial effect he exercises upon public taste by putting it in the power of the friends of true art, who are prevented by the high prices of admission from attending the concerts of the Royal Band, to enjoy, for a comparative trifle, the best and noblest productions of the great masters of classical instrumental music. But, while honouring the mighty composers of the past, Herr Liebig is not neglectful of the representatives of the present; and more than one young composer of talent is indebted to him for his first introduction to the public. But what has more particularly tended to render Herr Liebig so popular, is the total absence of aught approaching charlatanism in whatever he does. Such a man is an honour to the art which he professes. The Royal Orchestra has commenced its series of Symphony-Concerts for the season. In obedience to a generally expressed wish, the directors have determined on giving a certain number of old and less well-known operatic overtures. The first specimen selected was the overture to the opera of *Tigranes*, by Righini, which was produced for the first time in Berlin in the year 1800. As a curiosity, it is interesting, but cannot be said to possess any very great intrinsic merit. The principle, however, on which it was included in the programme, is a good one.

In Munich, also, great activity is displayed in musical circles at the present moment. The campaign has been opened by the Musikalische Academie, which gave a fine performance of Mendelssohn's *St. Paul*. Very shortly, the Oratorien-Verein will introduce Handel's great work, *Saul*, to the Munich public, who never yet enjoyed an opportunity of hearing it; the Stringed Quartet of members of the Royal Orchestra will commence their exceedingly popular Soirées; and the Liedertafel, under Professor Schönchen, execute Mendelssohn's choruses to *Antigone*.——One of the most distinguished amateur composers of the day, Count Ludwig Stanlein, has just written a new work, a Sextet for two Violins, two Violas, and two Violoncellos, which fully equals any of his former efforts in the domain of classical chamber-music.

In Paris, the musical season may be said to have been inaugurated with the opening of the Italiens, the opera selected being *La Sonnambula*, and Madlle. Adelina Patti impersonating the heroine. "Well begun, half-done," is a good maxim; and M. Bagier gave evidence of his sound sense by commencing his season with a work which, though old, is still universally popular, and with a fair vocalist who is such a favourite as Madlle. Adelina Patti. Her reception was most enthusiastic, and she sang magnificently. Her acting, too, was fully on a par with her singing. Her second character was that of Annetta, in *Crispino e la Comare*. It was the first time that she had sustained it in Paris, and she made a great impression. The Parisians are in ecstasies, and declare it to be the best thing she has yet done. This is foolish; for, as it is impossible to manufacture Dresden china from common clay, or ottar of roses from ordinary wild flowers, it is beyond the power of any artist to achieve greater things, or even as great, with such music as that written by the Brothers Ricci than with that due to the pens of composers like Donizetti, Bellini, Meyerbeer, and Rossini, to say nothing about Mozart. To assert that Madlle. Adelina Patti's Annetta is superior to her Rosina, Caterina, Norma, Amina, and Zerlina, is an absurdity. But novelty adds many fallacious charms. In a little time the Parisians will become more reasonable. It is not much to the credit of M. Bagier's management that Madlle. Adelina Patti was but indifferently supported. She has since appeared in *Lucia di Lammermoor* and *Don Pasquale*.——Another of M. Bagier's *prime donne* this season is Madlle. Emma Lagrua. When very young, she sang, fourteen years ago, at the Grand Opéra, in *Le Juif Errant*. Great things were then predicted of her by the French critics. Since that time, she has visited England, Russia, Italy, and America, leading the nomad life peculiar to vocalists, Arabs of the desert, commercial travellers, and Queen's messengers. She sings well, and has been well trained, but time and hard work have not failed to impair her voice somewhat. Her first part, that of Norma, was a decided success, however. But her greatest hit has been Desdemona in *Otello*. She particularly distinguished herself in the exquisite and well-known Willow-Song, "Assisa a un pie di salice."——A young French tenor, M. Ketten, about whose voice some most wonderful stories were current, has made his *début* in *Crispino e la Comare*, as Ernesto. A short time ago he was merely an accompanyist at the Théâtre-Lyrique. Here some influential personage became acquainted with him, believed he possessed powers equal to those of a Rubini, a Mario, or a Sims Reeves, and procured him the chance of appearing at the Italiens. That M. Ketten can boast of good natural capabilities is an undoubted fact; but equally certain is it that, if he wishes to turn them to advantage, he must go through a course of hard study. The diamond as yet requires a deal of polishing. At any rate, it will be some years before M. Ketten can hope even to approach the three great artists mentioned above.

Gluck's *Alceste* has been revived, with an immense flourish of trumpets, at the Grand Opera, where it was last represented in 1861. Mad. Viardot-Garcia was then expressly engaged to enact the part of the heroine, now sustained by Madlle. Marie Battu. This opera was first produced at Vienna, in the year 1767, and in Paris in 1776, but was never as popular in the latter capital as any one of the four other operas which Gluck brought out there—a fact attributed not so much to the music as to the unsatisfactory *libretto*. Speaking of the latter, Jean-Jacques Rousseau declared that he knew no other opera in which the passions were less varied than in *Alceste;* that the whole plot turned upon only two sentiments—affliction and terror; and that the composer must have been sorely pressed to prevent his music from becoming lamentably monotonous. On the present occasion *Alceste* has been got up, under the superintendence of M. Hector Berlioz, very magnificently; but, despite all the recalls and applause the first night, it is not likely to have an extremely long run; in fact, people say that M. Perrin is already looking out for something to replace it.

According to report, Auber, that ever-youthful octogenarian, is busy on a new opera, *Le premier Jour de Bonheur*, the *libretto* of which is from the practised pens of MM. Cormon and D'Ennery. It is to be produced, at the Opéra-Comique, in May, the month of the Great Exhibition. According to another report, Strauss has paid £60,000 for the right of giving a series of monster concerts at the Exhibition; and, according to a third, Rossini has finished the scoring of his *Petite Messe Solennelle*, which has been performed twice, with pianoforte accompaniment, at the house of Count Pillet Will.

THE DRAMA.

THE theatres are in full play, and we believe we may add in full pay, although the strenuous efforts of the sensational dramatists, enterprising managers, inventive scene-engineers, and scenic artists do not seem to have resulted this season in producing, at any theatre, one of those decisive pieces which, like the "Colleen Bawn" or "Peep of Day," will last a whole year. Indeed, there are perceptions of the sensational drama somewhat palling on the public taste, such as it is. The unhappy lady who has married a second husband, not being quite certain that the first is dead, and who is placed in very equivocal situations by the appearance of a vagabond who is unusually familiar with her, no longer seems to excite the deep commiseration of the audience. They seem to think her a disreputable or foolish person; and it is in vain she faints, and shrieks, and weeps, in white muslin. Indeed, the genius of modern dramatists is so ingenious that they heighten the event by producing two exceedingly well-trained children to pile the agony as by their unconscious babble they betray the mother's secret. They have the newest toys to play with, so that they may realize the scene to all the fashionable mothers; and the artificial little urchins simulate their parts as well as their elders. It is also a new variety in such plays to get rid of the very much used but unserviceable passion of jealousy. The fair bigamist is provided with a second mate—we cannot strictly say husband—who is utterly impassible. Nothing can make him jealous, though the lady gives hundreds of pounds away to a shabby vagabond under the plea of charity. The audience somehow seem more inclined to smile than weep with the lady heroine, though embodied by so comely, graceful, and clever a person as Miss Herbert, who is unexceptionable in her attire, her poses, and her faintings. It may be that the audience are so wicked as to laugh at bigamy; but they seem too decorous and too jolly for that. It may therefore be that the actress, with a great deal of intelligence, lacks that power of personation and embodiment of the character which excites sympathy by its truth and apparent unconsciousness. Or it may be that, whilst the distress is excessive, the mode of getting out of it is so easy, by the expression of a few truthful words, that folks will not let their sympathy be juggled by mere silliness. Whatever the cause, the drama

called "Hunted Down, or the Two Lives of Mary Leigh," does not produce the old kind of effect. It is skilfully enough manipulated by Mr. Boucicault, whose dramatic manufactory must be in full work just now. It is founded, as it is supposed, on a novel by a popular living authoress, though the story, that of a man marrying a woman for her money and running away from her, is very much older, and has been put on the stage sixty years since, as may be seen in Cobb's "Wife of Two Husbands," produced on November 1st, 1803, at Drury Lane Theatre. This old piece was, however, itself taken from a French drama by a Mons. Pixerécourt, the Boucicault of his day. So popular was it that no less than three translations were made into English; one of them being by Miss Gunning. Such, however, is the larceny of the stage, that no doubt the French author stole it from some earlier play, and the modern novelist and dramatist have probably taken the story from some more recent version of the Parisian stage. Whatever the merits of modern story-tellers or playwrights, it certainly does not consist in invention of original plots, though they have considerable ingenuity in weaving a more interesting web out of old materials.

It is a relief to pass from the close and artificial drama of this kind—oppressive from its criminal odour and fetid with a very far-fetched kind of morality—into the more natural atmosphere of an English domestic story like that of "Meg's Diversion," at the tiny Royalty Theatre, by Mr. Craven, who wrote the genial little piece, and acts the hero himself. Whoever has seen his "Milky White," or the "Post-boy," or any of his domestic dramas, will know with what perfection he delineates a domestic circle of homely English life, and creates a story and an interest by developing the feelings of his *dramatis personæ* as wrought upon by circumstances. He delights in portraying middle-class English life; and this he does with the humour of a Wilkie and the delicacy of a Mulready. In the present instance his hero is a simple-minded, uneducated country-townsman, who has come in to property, but still retains a very modest notion of his own qualities and capacities. A country wit and beauty, charmingly played by Miss Patty Oliver, unrefined but not unfeminine, makes a butt of him, and, through the misrepresentations of a designing father and sister, excites him to a declaration, and jilts him. The skill exhibited by Mr. Craven, both in the drawing and the acting of the hero, is truly dramatic. It is never over-strained; it is never false, though it is moving. There may be, indeed —for nothing is perfect to a critic's eye—a *leetle* too much of his excessive goodness, and the least bit of self-consciousness of it, in the author-actor. It has been well said, he should act more to his stage-companions, and less to his audience. Nor is this charming picture of English life confined to one character. Several others are well sketched in by a firm hand and with an observing knowledge of character. The idea of a sublimely self-sufficient gentleman, who exercises a pseudo kind of liberality, and would educate a poor girl for his wife, or marry a widow that he might train up her children so as, he expresses it, to create models of perfection according to his own standard, is ingeniously conceived, and marked in a satirical way without exaggeration. The selfish boor of a father, his own better-educated but more worldly brother, and the minx of a sister, are all capitally delineated, we must also add, exceedingly well played, by the very clever company Miss Oliver has got round her. Nothing can be farther removed from the coarse, criminal, and mechanical drama called sensational, though it has really no exclusive right to that epithet; for this little drama is highly sensational, if that term includes the affecting strongly the emotions. Indeed, it adopts the reigning stage fashion to some extent, and realizes in one scene Mr. Calderon's popular picture of "Broken Vows." This is tastefully done and very well delineated by the scene-painter, Mr. Cuthbert; it is, however, the background of this scene, which is entirely his own, that proves him to be a genuine artist. We wish we could say that this little piece, so charming both in its writing and its acting, was as attractive as the coarser dramas. We trust, at all events, that it fills the theatre nightly, and rewards the tasteful manageress for producing it. It will be well when this class of drama, somewhat perhaps enlarged and strengthened, resumes its position at the leading theatres. We say resumes, because it really is of the same species as the "Heir-at-Law," "Speed the Plough," and the "Road to Ruin," which so delighted our grandfathers and grandmothers; and is free from the caricature and extravagance which have made them obsolete. It has their vivacity and healthy human character, and deserves to be the staple of modern dramatic delineation.

At what ought to be the real home of the English drama, Drury-lane Theatre, the version of the German epic drama, "Faust," is still running, and drawing, from the name of its original author and the pictorial and stage effects, nightly audiences sufficient at all events to meet the expense of the hordes of witches, market-people, students, and soldiers who literally crowd the enormous stage. As a spectacle it is good, though not surpassingly so. Mr. Phelps's Mephistopheles was expected to be something as markedly excellent as his Sir Pertinax MacSycophant or Bottom the Weaver; but it is not. There is, indeed, little scope for any expression but a continued dry sneer at the world and his particular victim, who, in spite of his philosophy, is a very great silly and something worse. Mrs. Vezin has been praised as Marguerite; but as the character only requires a cherub-faced *Gretchen* of some sixteen years, she cannot fulfil our ideas of Retsch's outlines. The pantomime at Christmas will probably suspend the great German drama, to the relief of many who prefer the broadest jollity to a sombre piece where the poetry and philosophy are necessarily eliminated to produce cumbrous stage effects.

At the Olympic Theatre there has also been something like a resting on a great name in the production of a well-known amateur drama by Mr. Wilkie Collins, in which Mr. Charles Dickens (who was ably supported) performed the principal part. It has had a scene or two added, and is certainly well-written, admirable for its original intention but hardly elaborated enough for the public stage. All the forcible emotions are rather described than acted. It was not new to many who had seen it performed by the celebrated Amateurs. It is now called "The Frozen Deep," and to those who do not know it, we may briefly say it represents a band of Arctic voyagers snowed up, and ultimately escaping. Amongst them are the accepted and rejected lovers of an hysterical young lady, who is clairvoyant, and foresees at home what takes place in the icy regions. Miss Foote enacted this young lady with great force and grace. As the piece continues in the bills and was duly applauded, we may suppose it is a genuine success.

At the Princess's one of those elaborated dramas wherein some remarkable scene is to afford pictorial illustrations to all the available walls in London, has been produced to succeed the "Huguenot," which has not sustained its popularity to the enormous length that the "Streets of London" did. The subject this time is Mr. Dickens's historical story of "Barnaby Rudge," though the drama seems rather to be founded on an American stage version than on the novel itself; and instead of the half-witted boy and his sagacious raven being the prominent figures, Miss Miggs, transformed into a Yankee girl, is the heroine. She is played by a comely actress, Mrs. J. Wood, who has won her celebrity by a pretty, intelligent countenance, which she seems resolved by no means to disfigure. It is evident that on the American stage this version of Miss Miggs is deemed the chief attraction of the piece called "Barnaby Rudge;" but there being no such notion here, and the novel and its writer being profoundly esteemed, there was a slight resentment at this unceremonious treatment of the English author. This, as is the foolish custom at this theatre, was resented as a personal insult to "a lady and a stranger;" but an audience know nothing of performers except as artists, and criticism has nothing to do with sex or private acquaintance. Mr. Vining, who is otherwise a clever and sensible manager, seems determined to provoke a trial of the issue as to the right of hissing in a public theatre. The state of the drama shows that audiences are quite indifferent and critics lenient enough, and that a little wholesome opposition would be beneficial. The scenery of this piece is remarkable for its effects. There is a fire equal in

extent, though not in exeitement, to the one which made the "Streets of London" so popular; but much better are a sunset and a moonlight, which have really artistic effects of light and shade, truthful and novel. The sunset has moving clouds and a changing light, with all the effects of a lurid sunset after a spring tempest. The moonlight has very niee gradations of tone, and is softly beautiful. Mr. F. Lloyds has a glowing imagination and great ingenuity as a scene eontriver as well as a scene-painter.

At the Strand, two eomediettas have been produeed. "In the Wrong Box," a very trifling piece direct from the Freneh. No doubt, in the original, Mons. Ravel plays one of his impudent blundering men, who mistakes one woman for another, and reveals his own designs. There is nothing in it. The other pieee is of a far higher order, being an adaptation and improvement of one of Goldoni's little eomedies, called "Neighbours." It is eleverly Anglicised by Mr. Oxenford; but still the quaint Italian strueture peeps through, and is indeed predominant. A peppery old father eonduees to his own daughter's elopement. The imbroglio is ingenious, the dialogue vivacious, and the charaeterization, though bordering on carieature, is humorous. It has, however, a refreshing flavour, from its perfeet freedom from a French taint of forced ingenuity and sordid viee.

At Sadler's Wells a very pretentious drama has been produced, ealled "The Purpose of a Life," in which the Yelverton ease is partially dramatized. Miss Marriott, as the heroine, is made to deelaim as to the power and excellence of the histrionic art; an introduetion, probably owing to the author being an actor—Mr. Stephenson, of the Adelphi Theatre.

Her Majesty's Theatre has been taken possession of by Mr. Faleoner, who has opened it with a five-aet drama entitled "Oonagh; or, the Lovers of Lisnamona." It is founded on some Irish novels; but more particularly on Carleton's "Fardonrougha, the Miser." On the first night of its production it was so monstrous in its proportions, and so profuse in its dialogue, that it eompletely wore out the audience, whieh melted away eaeh aet, until searcely a fourth of those who hailed it (and a speeeh of Mr. Falconer's) with good-natured expectation, were left at midnight; and very few indeed at one o'clock, when the green curtain onee again went down. The story is intensely Irish, the acting fair, the scenery pieturesque, and the music tasteful; but the talking so discursive and exeessive that it seemed to flood everything else. We presume it has been materially eondensed and curtailed, as it eontinues to be aeted.

At the Adelphi, the last new drama of "Ethel" has been suspended, as it is announced, in eonsequenee of the illness of Miss Kate Terry. That lady, however, is advertised to appear in a new drama, by Mr. Tom Taylor and Mr. A. W. Dubourg. In the mean time, a very young aetress, of the name of Neilson, remarkable for her modest graee, has essayed the stagy eharaeter of Victorine in the drama of that name. The eomplex ingenuity of subsequent dramas makes the old pieee seem very bare and erude.

Those who like to combine exercise with their theatrical amusements, may take an evening walk over Westminster Bridge, and see the performance of a eompany under the management of Mr. Nation, at Astley's Amphitheatre. The play is a dramatic version of Mr. Dickens's last novel, "Our Mutual Friend," and is ealled "The Golden Dustman."

REVIEWS.

From Calcutta to the Snowy Range. By an Old Indian. (London: Tinsley Brothers.)

IN times when steam-travelling and we were young, we were mostly eontented with entertaining a general impression that British India was excessively hot, that the food of its inhabitants prineipally consisted of rice and curry, and that the English there resided in houses called bungalows, and were waited upon by numerous servants, each of whom performed only one speeies of duty. We rarely took the trouble to reflect upon the vastness and magnificenee of the enormous Asiatie realm of whieh we hold the sovereignty. Until the now almost forgotten Waghorn and his followers simplified aeeess to the East, the knowledge of its picturesque old eities, with their temples and palaees, constructed in the most delicate and fancifully-beautiful style of arehiteeture and enriched with the most profuse ornamentation, was, with few exceptions, eonfined to the learned and gallant sons of the Old Lady of Leadenhall. We had heard but little of its seenery, varying from the eold grandeur of the snowy Himalayas to the alternating fertility and aridness of the plains and dense luxurianee of the tropical forests. However, year after year, the men of art and the men of trade laboured together to rend the veil and to open the *quasi* sealed book, until at last the Indian mutiny loosed the floodgates of information, and terribly brought the eountry before our notice. Interest was exeited among all elasses in the seenes where those horrors were enaeted; and a work like the one before us, giving an amusing narrative of progress, and vivid sketehes of the most prominent places on the grand route from Caleutta to Simla, in the hill eountry, under the snowy range of the Himalayas, is still likely to be weleomed, with sincere pleasure, by the reading public, as well as by those persons about to travel to whom it is specially addressed.

What a double panorama is suggested to the modern Anglo-Indian by the title of this book! One of its divisions raises memories of the matter-of-fact, unpieturesque, yet quaint and eharacteristic Anglo-Indian life; the other, of all the gorgeous, though somewhat dilapidated, romanee of the East. The first vision presents the English sahib, in his helmet of pith, or felt with air-chambers, his light suit and white shoes, smoking his Manilla eheroot on a eane chair, with his legs elevated in front of him, and drinking brandy and *belatee-panee* (which is, being interpreted, brandy and soda-water); or travelling in his eomfortable first-class railway carriage, eonstructed so as to admit of the formation of couches in the interior; or riding forth to enjoy the sport of pig-sticking in the jungle, or shooting the varieties of game offered to him, without the neeessity of taking out a lieense, from teal to tigers. The second evokes the shaven Hindoo, or turbaned Mussulman, in his gay shawls, rieh silks, or white and eoloured eotton eostume, sitting, monkey-fashion, on his haunches; rejecting meat altogether in the first instance, and pork in the second; taking off his red or embroidered slippers when a European would remove his hat; refusing to allow the young and lovely among his females to appear in public; in faet, living in a totally un-English manner, both in aspeet and reality.

The journey from Calcutta to the Snowy Range is no longer, as formerly, effeeted altogether in the *dâk gharry*, or Indian post-chaise, a one-horsed vehicle of about the dimensions of a London four-wheeled eab, and made so as to admit of the passenger's reclining at full length in the interior, but, as far as Delhi, by the railway, whieh is now eompleted for a distanee of 1,019 miles. Of some of the railway arrangements our "Old Indian" complains sadly, but good-humouredly; and we will extract his deseription of a first-class carriage, for the benefit of whom it may eoneern:—

"The train, as it stands drawn up by the platform, with its bright-polished engine shining brilliantly in the sun, and snorting impatiently in puffs of curly steam, is at a first glanee uncommonly like a railway-train in England or anywhere else. Bnt a new-eomer would soon diseover a differenee. The earriages are, to begin with, very mueh stronger, larger, and loftier, and are proteeted from the sun by a double roof—the upper one a few inches removed from the lower, and projecting slightly on either side. Then, to every window there are, in addition to the glasses, Venetian

blinds, and to the first-class carriages frequently sun-shades besides; ventilation is also specially and very necessarily provided for: indeed, as far as is possible, the carriages are built for the climate. But what avail double roof, Venetian blinds, or sun-shade, against the terrible sun of an Indian summer! Then the carriages become, as it were, red-hot; and entering one is like going into a heated furnace. You soon assume a listless, half wrung-out appearance, and keep yourself amused by mopping up the perspiration, as it freely pours from you. The very seat is hot to the touch; and you refrain from leaning back, lest your coat stick to the varnished panel. If, as is devoutly to be wished, no ladies are present, you relapse into the free-and-easy, take off the boots from your swollen feet, denude yourself of coat and waistcoat, unfasten your soaked collar, and hang it up to dry, put your feet at a comfortable angle on the opposite cushion, elevated, if possible, to a level with your nose, light your cheroot, and, stimulated by a 'peg' (which is *brandy-shrab and belatee-panee*), dreamily subside into a patient endurance of the miseries of a long Indian summer railway journey."

Having traversed, in this fashion, the plains of lower Bengal, with their rice-fields and fantastic tropical vegetation—broad-leaved plantains, fan-like palms, and graceful cocoa-nut trees—we cross the sacred Ganges by a bridge of boats, and reach Benares, the most holy city of the Hindoos, with its well-known ghauts, or flights of steps, rising from the river and thronged with bathing, praying, and sleeping devotees, and the Great Mosque of Aurungzebe towering above the Hindoo temples and dense piles of buildings. Thence, by Allahabad, at the confluence of the Ganges and Jumna—also considered especially sacred—to Cawnpore of sad memories, where we pause to contemplate the handsome memorial erected over the well down which our murdered countrywomen and children were thrown. Then to Lucknow, the theatre of so much display of British valour, with its immense yet fairy-like palaces, terraced tombs, and "world-renowned Residency—which stands now in its solemn ruin, a monument alike of the bravery and devotion of that handful of heroes who held it for five months successfully against overwhelming numbers, and of the self-denying heroism of the women and children who died uncomplainingly in its cellars."

From Luckuow we reach Agra, celebrated for its Taj Mahal,* the most splendid and most beautiful mausoleum in the world. Passing under a mosque-shaped gateway of red sandstone, and walking down a pathway ornamented by alternate basins of water and parterres of flowers, and shaded by rows of dark cypress trees, we find ourselves in front of an edifice of pure white marble, surmounted by a dome of the most graceful form, with a gilded crescent at its summit. We enter this, the loveliest conceivable hall of death, and can realize the intention of its founder to imitate the abodes of bliss in Paradise. In the centre, surrounded by a screen of marble trellis-work, are the tombs of the Emperor Shah Jehan and his consort, Arjunand Banoo, side by side. Walls, screen, and tombs are all inlaid with precious stones—cornelian, lapis lazuli, agate, and the like—in the most exquisite workmanship. The slightest whisper uttered there is re-echoed in the mighty dome above with marvellous effect. Our author observes: "I see it stated in a Persian translation of a description of the Taj, that even unimaginative persons have been known to burst into tears on entering the building." From Agra we arrive at Delhi, "the famed capital of the Moslem kings," situated in the midst of the ruins of old Delhi, which "extend some ten miles to the south-east and south-west. More or less over this large extent of ground lie scattered the wrecks of palaces, forts, graveyards, and tombs: . . . . as each successive conqueror came, he seems to have sought to excel his predecessors in works of grandeur and majesty." The seat of the Grand Moguls in the late rebellion has shared their fate, though its remains still attest their former lavishness and sense of beauty.

* Supposed to have been designed and built by a Frenchman, Austin de Bordeux, 1630—1647; and to have cost £3,000,000.

At Delhi the traveller must betake himself to a *dâk gharry*, and, after a fatiguing journey of 138 miles, will be invigorated by breathing the fresh air of the hills; leaving "the interminable dreary level of the plain, seen lying like a mirage far away in the distance below," and gradually rising among "rocky ravines, bright sparkling waterfalls," "smiling green-clad slopes," towards the snowy range beyond, of which he will enjoy occasional glimpses.

Our author concludes with some lively notes on Simla, the queen of Indian sanitaria, which he reached in the dead of winter, but where "balls, picnics, archery, amateur theatricals, and professional concerts follow each other, in *the season*, in quick succession;" where châlet-like dwellings are "dotted about on crags or half-buried in redundant foliage;" where "lofty ranges of mountains tower in the far distance, covered with eternal ice;" where "romantic steeps" and "deep green valleys" charm the exhausted fugitive from the torrid lowlands.

Eight coloured illustrations and a map add to the value of this well-conceived and well-written handbook; and we think that the reader who follows the "Old Indian" through his journeyings and sight-seeing will obtain an excellent idea of the most interesting portions of our Eastern dominions.

Travelling in Spain in the Present Day. By Henry Blackburn. (Sampson Low, Son, & Marston, 1866.)

We owe Mr. Blackburn's experiences of Spanish travel to the charming of the Franco-Hispano billsticker—one of the very newest we should imagine, of the *cosas de España*—who invcigled him and his party across the Pyrenees from Biarritz. Their tour—made as rapidly as villainous transport, and as uncomfortably as worse commissariat and continuous imposition could insure—lasted three months, and cost them fifteen shillings per head per day. Beyond the very useful wrinkle, that those who seek Spain in autumn should take winter clothing, and some valuable hints for travellers in his appendix, the author has added little to our store of knowledge; and, to do him justice, he makes no such pretence. We are not of those who believe there are deep-seated mysteries and beauties in Spanish land and Spanish character. On the contrary, we believe that what is worth knowing about that most untempting country has been known for some time; and that what is worth seeing has been seen, thoroughly studied and exhaustively described by generations of writers, among the most recent of whom are Lady Tenison, Mr. Owen Jones, Mr. Ford, Mr. O'Shea, and that sketcher of sketchers, Mr. George Sala. We agree with Mr. Blackburn that Spain is in no state of transition at all (unless there be such a thing as transition backwards), and that centuries may elapse before sufficient material for a new book of travels will have accumulated within her borders; and while we admit also the argument in his preface, that his own was, from a publisher's point of view, superfluous, we must congratulate him on having so fairly escaped from a false position.

The tour—a regular Britannic scamper—took in, on its southward direction, Burgos, Madrid, Cordova, Seville, and Cadiz; thence, touching at Malaga and Valencia, the homeward course was shaped through Saragossa and Barcelona. It were singular, indeed, if each of these points had not afforded an opening for literary as well as for artistic sketching; and of these the party availed themselves. We have a Madrid bull-fight, as might be expected, with a reprint of a "correct card of the ring," which, to the best of our memory, is a novelty. Toledo, Cordova, Granada, and Seville, all offer occasion for brief and modest gossip, *currente* "*cicerone*," on Christian and Moresque art; while the morning, noon, and night of every day, are pregnant with reflections on the seediness and seemingly gradual decivilization of Spain and the Spaniards, which, despite the protestations of the Salamancas, the Pereiras, and the Petos shows no symptom of being arrested by stock-jobbing or railway-making. The following bit of character, which reminds us forcibly of Mr. Sala (whose Spanish studies are

shortly to be re-published), is an amusing specimen of the lighter portions of "Travelling in Spain."

"As for the middle class—the shopkeeper's—their nonchalanee was most amusing. We went into a confeetioner's one day to purchase some chocolate, and were deliberately told that, if we liked to get it down from a high shelf, we could have it: no assistance was offered, and we had to go empty away. In another place we had been selecting some photographs and prints, and suddenly found that we had not time to conclude our purchase that day. Never shall we forget the air of relief with which the man shut up the portfolios and lighted his cigarito. If we would but leave him in peace, and come 'mañana,' he would be for ever grateful."

Small wonder then that countless acres of this nature-favoured land lie idle, while irrigation-works, planned by the Paynim before his expulsion from Europe, are yet unfinished; or that priceless stores of chemical and mineral wealth effloresee vainly from her plains, or slumber unwrought and unprofitable (since Roman days) in her thousand hills! Each traveller but adds one more to the heap of proofs that this "to-morrow and to-morrow and to-morrow," "to the last syllable of recorded time," is a better-fitting key than the oft-tried one of religion, to the mystery of the poverty and degeneracy of Spain.

Mr. Blackburn and party—for truth and gallantry demand that the share the ladies had in the joint performance should not be ignored—have extensively and advantageously availed themselves of the co-operation of their able predeeessors; and their richly-bound pages, decorated with a score and more of beautiful wood-engravings, after John Phillip, R.A., E. Lundgreu, Walter Scvern, and other artists of no small excellenec, will be welcomed in the drawing-room if not in the study.

A Rubric Edition of the Book of Common Prayer; with Titles and Borders designed and drawn by R. R. Holmes, F.S.A., and engraved on wood by O. Jewitt. (Rivingtons.)

There is no book which has furnished such an opportunity for decorative display as the "Book of Common Prayer." Its type, binding, rubrication, initial letters, borders, illuminations, and pictorial illustrations, have each in its turn engaged the attention of the artist. We have Prayer-books in which not only the borders and illustrations, but the whole of the letterpress, are copper-plate engravings. A specimen of this is to be found in one engraved by John Baskett, and published in 1717.

The desire for decoration in ecclesiastical matters has latterly rather inundated us with ornamental Prayer-books. We have had all kinds, good, bad, and indifferent, from the spiritless imitations of mediæval illuminations, where colour (laid on without taste or discrimination) has been supposed to compensate for vulgarity and want of meaning, to the refined and artistic productions, where ornament and illustration have kept their proper place and have not been obtruded on the eye to the distraction of the minds of those who would confine their attention to the text.

One of the latter kind has just come under our notice, and we have much pleasure in inviting the attention of our readers to it. It is published by Messrs. Rivington; the titles and borders are from the designs of Mr. R. R. Holmes, F.S.A. Though these may appear to have been founded on mediæval illuminations, especially in the titles, they are all original, and show good taste, feeling, and refinement on the part of the artist. Many of the borders are particularly pleasing.

OLLA PODRIDA.

Art-teaching by Correspondence.—A gentleman on whose sound judgment we rely, writes as follows:—

"In the artistic portions of your periodical much space has been deservedly, and I doubt not to many of your readers very beneficially, devoted to instructions in painting—in water-colours by Mr. Penley, in oils by Miss Constance Clarke. The public will, I am sure, be thankful for all the valuable directions which these talented contributors have given. They will tend to create a love for the art itself, and to facilitate its practice. The method of teaching by written communication, however, is by no means new. It has been successfully followed for many years by a well-known and accomplished artist, Mr. Williams, of Upper Park Place, Southampton; and the efficacy of the system, as carried out by him, has been thus very strongly attested by the first of living art-critics:—

"'Dear Mr. Williams,—I like your plan of teaching by letter exceedingly; and not only so, but have myself adopted it largely, with help of an intelligent under-master, whose operations, however, so far from interfering with, you will much facilitate, if you can bring this literary way of teaching into more accepted practice. I wish we had more drawing-masters who were able to give instruction definite enough to be expressed in writing; many can teach nothing but a few tricks of the brush, and have nothing to write, because nothing to tell.

"'With every wish for your success—a wish which I make quite as much in your pupils' interest as in your own—believe me always, faithfully yours,

"'J. Ruskin.

"'Denmark Hill, November, 1860.'

"To those who may be inclined to doubt the efficiency, or the ease and convenience, with which a master may by correspondence direct the studies of a pupil, it may be well to state in a few words the method adopted. The *power* of the pupil being first ascertained, drawings are selected for him as nearly as possible of the right *strength*, and sent with written instructions for his guidance in working. His copies from them are reviewed by the master, and returned with practical hints for the correction of faults. When desirable, drawings are prepared, expressly, for individual pupils, and sent to them in the successive stages of progress; their copies being in each stage examined, commented on, and re-transmitted by the Post.

The Art Union of London have in the hands of the engraver the national pictures "Here Nelson Fell" and "The Meeting of Wellington and Blucher," and have just acquired (for engraving) the beautiful work by Mr. Armitage, lately exhibited at the Royal Academy, and called "The Parents of Christ seeking Him."

We cannot help drawing the attention of all admirers of Chromo-Lithography to the Society's splendid specimen of the art by Messrs. Hanhart, after Birket Foster, called "Wild Roses." Copies were given, some years since, as prizes, but are now to be had, besides one chance in the general drawing, by the three-guinea subscribers of the year 1867.

No more curious illustration of the diffusion of the art of design and the value to that art of the elegant process by whose aid we are enabled to deck our pages with high-class works, could be given than the pictorial almanacks of the period. The Insurance offices long enough ago inaugurated the custom; traders of all sorts have followed it; and perhaps the gem of all possible almanacks has now been issued by the indefatigable Mr. Rimmel. Albeit comparisons are odious, we must say that this exquisite production, comprising a dozen of the most comical little fancies, chromo-lithographed in the daintiest manner, is from a French *atelier*. Let the London houses look to their laurels. *Fas est ab hoste doceri.*

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NATURE AND ART

January 1, 1867.]

BIZZ AND HER FOES.

By Mrs. S. C. Hall.

IN THREE CHAPTERS. CHAPTER I.

"THERE is no use in putting it off any longer, ma'am," said the cook; "the upshot of it will be, we shall be murdered intirely, if we don't get a yard-dog:—those skelping, keeking, flying here and there, 'talian greyhounds—poor shivering 'atomies, I call 'em—all legs and no body—such shadders as *them* are no more use for watch-dogs, no, not so much as that little hairey-walker Weazel, with a head so like a dandelion, that if I blowed it hard enough, I could tell what's o'clock."

There was a pause; cook noted the unconvinced expression of my face, and resumed—

"So exposed as the place is, ma'am!—standing in a corner, and not a hap'orth to hinder the stable and all belonging to it.—Oh, ma'am dear, what are ye saying about the Po-leese? I'd take an oath this blessed minute on all the books that ever war shut or opened, that the last of them blue-bottles that ever rounded the corner of the Gloucester-road, was this day week. You know, ma'am, we have two of them 'talian greyhounds, and you yourself calls them Ninon the Wise and Folly the Foolish,—well, I opened the gate to see if I could see the milk coming down the road, and to keep Folly in, I lifts her in my arms, when she takes a flying leap after the tollman's magpie, when up he sidles——"

"Who? the magpie, cook?"

"No, ma'am, the Poleese; 'Don't agitate yourself, good woman,' he says, 'the weather's too warm for agitation, stand still, and call the little beast: you'll never catch her.' 'Do your duty,' I says, 'you're long and lane enough to catch a dragon-fly, let alone a 'talian greyhound,—"baste," indeed!—I only wish I had the basting of you! and how dare you call me "good woman"?' I says, for I was struck dumb by his impidence, and hadn't a word in my head; and with that, before I could draw my breath, he takes off his hat, that isn't a hat, but a 'shiney,' and says, 'I ask your pardon, I did not intend to call you out of your name.' Oh, didn't I wish for a stone in a stocking, and him and me on the fair green of Ballynatrent!"

Now this was a hasty admission on the part of our excellent cook, which she would not have made in cold blood. It is by no means an uncommon thing to find *Irishmen* in that, or indeed I am sorry to say, in any class of life, stammer and fidget, and look confused, when you intimate that they are natives of the Green Isle; and I am ashamed to confess that I often meet with Irish gentlemen, who, if they do not deny their country, are too ready to deal it a vigorous kick, as if by spurning the land of their birth they elevate themselves; but not so with *Irish-women:* their eyes sparkle, and their cheeks flush, and their sweet voices (none the less sweet for the intoning their enemies call "brogue") speak out frankly what they feel and believe—that with all her faults, there is no country in the world to be compared to their own "darling Ireland." I reverence that love of native land. I need not tell my readers, young or old, to what country our cook belonged; you could not hear the sound of her voice, you could not look into her soft grey eyes fringed by long black lashes, you could not experience her desire to oblige, no matter at what personal sacrifice, without knowing at once that she was a daughter of the "Emerald Isle." Every one said she was too handsome for a cook, but what was better, she was a grateful and affectionate servant, ready, as she declared, at any time "to go to the world's end through fire and water to serve me or mine." That I did not require, but I should have been glad, if she had put things in their right places, and did not make a flat-iron do duty as a door-weight, and oblige the door-weight to act as a coal-hammer: the housemaid once declared she made her bed with the fire-shovel—that was a libel. But the remarkable thing about our cook was her stoutly denying she was Irish:—"Irish! she had no call to them, her grandfather indeed might have been born there, or her grandmother, but that did not make *her* Irish, she hated the very sound of the brogue!" After such a declaration, she was particularly careful to call plates "pleets," lisping her words as finely as her own mincing-machine minced

meat: it was very sad and very wrong to tell that untruth, more especially as the genuine love of her country would break forth naturally. Sometimes she would come to me with a tale of Irish distress which brought tears into her fine grey eyes, and apologize in this way:—"Sure, the craythurs are in such misery, that my heart aches fit to breaking, at the way they're in; and you, madam, are so fond of *your own country people*, that though *I* have no call to the Irish, I thought *you* would like to know the trouble that's on them." There is a strong prejudice against Irish servants in England, but that was no excuse for cook's untruth; it was *the* blot in her character.

I was always glad to catch her tripping on this subject, and the allusion to the mode of warfare practised on "the fair green of Ballynatrent," was evidence of country so decided, that, very maliciously, I asked her to tell me "where the fair green of Ballynatrent was situated," upon which she blushed and turning away answered,—

"It's a place I heard tell of *once*, ma'am dear—a place, and its ways, my grandmother often discoursed about; but sure any place would do, if I could only get a good throw at him, the lazy sneering scamp;" adding "and now, if you plase, I'll go on with my trouble:—

"All this time, Folly was leaping her heart out after that ugly Mag., that kept on whistling with its eye cocked on the top of the great toll-board. Ninon the Wise, who well knew the differ between her master's whistle, and the whistle of a Brompton magpie, stood as grave as a judge inside the rails. At the minute, a cart came out of the great gate at Eagle Lodge, and my heart was in my mouth, for I saw no escape for Folly, and I could have spitted the *poleese*man as I would a goose, and he standing twisting a straw in his mouth.

"'Can't you run?' I says, 'and not see the dog massacreed in the sight of your eyes? what's the like of you for?' I says; I could not stir, for all the breath was gone out of my body, and my heart leaping like a fish after a fly. Well! the words were taken out of my mouth as much as the breath, I may say, by seeing Ninon, the stately crature, make one bound like a stag across the road, and seize Folly by the 'scruff' of her neck, from among the horses' feet, and drop her inside the gate, and the magpie whistling all the time, not caring if the poor foolish dumb animal had been scrunched under the cart wheels; and if she had, I'd have wrung the head off her, or my name's not Mary Ogreman!"

Here was a tangle! Mary Ogreman, our rosy cook, two Italian greyhounds, a magpie, and a policemen, all about a yard-dog!

"And what did the policeman say to Ninon's sagacity?"

"Well, I don't know, ma'am; I don't think he understood it at once, only his two eyes grew like the bull's eye of his own lantern, and he standin' in the middle of the road, until the carter cries, 'Lave the way, will ye, or I'll be over you as well as the dog,' and he not over the dog at all! who was squealing and grumbling at her presarver, like many a one else in the world, who don't know when they are sarved or saved. But what put me past myself intirely, was that more than two hours after, as I was hindering the white sauce from coming to a *bile*, a tattering ring shakes the back gate. I thought it was the Wenham Lake, which runs to waste before you can look round you, so I takes my sauce in my fist, and makes a rush at the gate, and sorra a thing was there, but that aggravating poleeseman. 'I beg your pardon, madam' (that was his word), 'madam' he says, 'but I am curious to know if the big thin dog is mother to the little thin one.' I don't know how I kept the sauce off him, the great omadawn, and me so busy!"

"What a good, wise creature that Ninon is," I exclaimed; "another reason, Mary, why we should not have a yard-dog."

"Oh, as you plase, ma'am," said cook, exchanging the air narrative, for the air dignified, and preparing to pass from the verandah to the kitchen; "as you plase, ma'am, of course; it 's just as you and the master plazes, only if all I've said this very half-minute don't prove what cruel want we are in of a yard-dog, why it don't, that's all! I suppose I must lose mee bits of clothes, and the little property in mee box, the caddy spoon, and punch-ladle that belonged to me grate grandfather, who *was* a man! As sure as the sun shines, we shall be all murdered; the dark nights too, and the end of the world so nigh."

I made no answer. Cook lingered, twisting up a refractory honeysuckle, still anxious to carry her point.

"I really do not want any more dogs, cook; it was only yesterday you said 'the house was poisoned with them.'"

"Oh, then, ma'am dear, sure I don't want another *in* the house, only outside, to purtect the property. Sure, I've shown you this very minute, how exposed the corner and stable is, and the *poleese* dear at a brass farthing a piece! and that whistling magpie, distracting one's mind with its nonsense, and the carts going the road, as if it belonged to them, and that poor darlin' Ninon obleeged to take police duty on herself, or see her comrade massacreed."

"And is a yard-dog to cure all these unpleasantnesses, cook?"

"Oh, ma'am, if it's laughing at me ye are, I'm done; I'll say to Hatchment, 'Don't talk to me about your dog, sir, if *you* plaze, though you have been so good as to offer her to my mistress, and she such a wonderful watch.'"

"No, Mary," I interrupted, with admirable gravity, "I am by no means a good watch."

"*You*, ma'am! oh, ma'am dear, sure I never evened the like of that to you,—you indeed?"

"You have just said I was a wonderful watch."

"I'd not contradict you, ma'am, but if the words came out of my mouth, it was not me that said them; it was Hatchment's dog Bizz, the baste, I meant was the watch, and a wonderful watch intirely she certainly is—by all accounts."

"I am very glad to hear it."

Brompton Turn
Pike Tolls.

"Just the sort of dog we want, that will stand no nonsense, want no looking after; not all as one of our dogs, ma'am, that crave as much attention as babies; sure if Ninon only wets her feet, she'll come to me to dry 'em before she goes into the drawing-room! and if an insect bothers her too much, and she can't get him, by reason of his earning his bread on the back of her neck, or right under her chin, she'll give me no rest or pace till I take down her comb and brush, to have a hunt for him, and she knows the sight of the comb as well as myself! Now Bizz is altogether different from that: she's a pure-blooded, smooth-coated bull-tarrier; that's what *she* is; her grip is the grip of a vice, her legs are bandy with strength, and though she has lost one eye, and her ears are riddled—indeed one is as good as gone—through tearing by cats, rats, and things, she do be after day and night, in shores, and out of shores; known she is to all rat-catchers, that would give their eyes for her, and though she'll do them a good turn now and agin, when they're hard up for a dog, she wouldn't, Hatchment says, call one of them master—not she. She wouldn't stay here, poor Bizz, the baste! only she has got a liking for me—Hatchment is certain of *that*."

There was a pause: cook returned to the charge.

"Talking of cats, ma'am, sure anything that would circumnavigate those cats, that destroy the garden, would be a blessing unspoken: the walls are as thick with cats, as an old kitchen with beetles. Why, the cats flick their tails and grin at our dogs: it's heart-breaking, so it is, to see the voilets and everything else scuffled about through them:—but there, ma'am, I have done my duty honest, if we're all robbed and murdered, its no business or fault of mine. I could swear the lock of the back gate, had a nail in it on Sunday morning: and I'd be glad to know how the coke-box, two trowels, and a blacking-brush were spirited off the bottle-rack in the yard. If Bizz, the baste,—but I'm done!"

Whenever poor cook's suggestions were set aside, she assumed an air of pathetic, yet offended dignity, that was highly amusing, and after the passion, whined out a running accompaniment.

"I know my place, I'm only a plain cook, roast and boiled ("biled" she pronounced it), soup, fish, poultry or game, bread or mint sauce, lobsters and crabs, and vegetables in all dressings, could undertake a cow and butter, feed pigs, hatch chickens, and cut the red heads of turkeys, agin the world; *I* never blazens *myself*, I'm only a plain cook, but scorn baking, ever since them dirty Germans set up their yeast against honest barm! I'm only a cook, and a woman, and know I'm of no account beyond my kitchen, and as clean a scullery as ever *mortial* entered! I'd never have mentioned the dog, ma'am, only you have a *laning* towards animals, and Hatchment says, he'll 'tice her into a bag somehow, and drown the poor faithful creature if you don't have her."

"Drown Bizz!" (she had long been of my acquaintance, though by no means one of my dog friends.) "Drown Bizz! why, if she is so valuable, why drown her?"

Mary O'Gorman—or as I am ashamed to say, Mary Ogreman, as she chose to anglicise her name—stumbled a great deal over the "reasons" her friend Hatchment had for wishing to get rid of this ugly paragon of canine fidelity; but the "reasons" were cogent: since he had given up his yard, he had no place "convanient" to chain Bizz in. She was an ugly customer in his shop, where, seated on the top of a potato-basket, she was ever ready to do battle with any one, or any thing, on the least provocation. Fond, indeed, I am of dogs, which (cunning things) they know so well, that many a homeless cur, of low degree, has followed me home, while the more aristocratic dogs, who never go abroad without an escort, sniff, and wag their tails, while regarding me for a minute or so; with their deep-brown, or grey-green eyes, seem to say with mute eloquence, "We know you, you love us and we love you." Yet frequently as I passed Hatchment's, and was tempted to order some pretty pot of mignionette, or fine hyacinth, or snowy and succulent celery (for Hatchment dabbled in flowers, and was eminent as a greengrocer), for a considerable time, the sight of that fiendish-looking dog, perched like grim death on a potato-basket, often scared me away. I did not mind her torn ears, nor her ugly, yellowish, bandy legs, nor that horrid broken-down nose peculiar to her family. I pitied her poor blind eye, which, half closed, had a penitential look, and gave an expression of gentleness to that side of her face, at once tender and touching—if that side happened to be turned to the street. I felt as if I could order whatever I pleased, but the other side might have belonged to another dog; there was a split in her upper lip, directly over one of the whitest and most determined-looking fangs, I ever saw in a dog's head; *that* was the side of her bright keen eye, and when it "eyed" any one intently, the lip moved and twitched in a nervous disagreeable manner, so that the ugly "gap," closed and unclosed, as if it sneered "Ah, ah! do you understand? I'd like to bite you." Her coat was jet black, and shone like satin; it was a coat any dog might be proud to wear. I suppose everybody has heard of the Irishman who said "the most eloquent feature in a dog's *face* was its *tail*." Now Bizz's tail could hardly be called "eloquent," but it was determined: it stuck out stiff and curveless, nearly on a line with her back, it seemed too stern and too sturdy to wag; there was no wag in it, it might have been made of cast-iron. Bizz disdained conventionalities, she would not wag her tail because other dogs wagged theirs. No, she stiffened it into perfect indifference, neither elevating nor lowering it, but let it be, a firm and independent tail. The first time I saw her on the potato-basket, she looked very different from what she did when on guard in her master's cart.

Once, I happened to be at her blind side when the cart stopped at our gate, and I asked Hatchment "how his poor dog lost her eye." I shall never forget the alarmed look he cast on the dog, as he advanced close to me, and said in a very low tone, "Madam, don't ask before her, she can't bear it, it hurts her feelings so, I'm glad she didn't hear you; she'd tear the Queen on her throne in pieces, if she heard her Majesty talking about her eye!"

On the potato-basket I saw frequently the reverse of the medal—the split lip quivering over the white fang, the keenly fiery eye, darting its arrows here and there from beneath its "tan" eyebrow, the blunt upturned nose, the bandy fore leg, and above all the sturdy tail, strong, muscular, and inflexible. Experience had taught me in time two peculiarities in this queer dog: she never picked a quarrel with another dog, she held herself above her species; if attacked by any combative lady, she would prove her breeding, and fight as became her bull-blood, but a dog-quarrel must be forced on her, and she was never uncivil to well-dressed or commonly respectable customers. One morning I wanted to order some pink Asters, and walked over to Hatchment's for the purpose. Bizz was on the top of the potato-basket as usual, and as usual I spoke to her; the only reply she ever made to a salutation to a *good* customer was to draw up her lip and wink. She did so with more graciousness than common, indeed she winked twice, and I felt almost inclined to pat her, when I perceived two boys peeping at her through the vegetables piled behind where she sat (the shop was double fronted).

"I have never got so much as one cabbage-leaf for my rabbits, since she took to the shop," said one rosy-cheeked fellow; "the governor says I may have the trimmings, but if we only look at them, she's out upon us. I wish she was dead."

"Oh, my eye! Isn't she ugly though?" observed the other urchin. Now whether Bizz caught the offensive exclamation or not, I cannot tell, but she sprang from her elevation, and would certainly have punished the author of the obnoxious sound, if both boys had not managed to bolt into the tailor's shop, next door, and shut themselves in.

But Bizz had good reason to hate the boys that congregated in Steward's Grove. Where the legions came from I never understood; unkempt ragamuffins some of them, whose clothes hung together by a miracle, and whose lungs were as strong as a brass trumpet: others were better dressed, but to the full as mischevious, with demure-looking slates and satchels, intent, I am sorry to say, on upsetting Hatchment's baskets, and in the *mêlée*, stealing his apples and oranges. One fellow more daring than the rest would "shy" (I believe that is the term) a piece of wood or a stone at Bizz, and run away, certain that she would pursue him, and then as Mr. Hatchment was much too unwilling to move quickly, the other lads would assault the nuts or apples, or whatever they could get at. The poor dog had as many bumps and scars as ought to have won her a medal, for those marks were indications of her guard over her master's property. Bizz had no worse foes than the mischievous boys of Steward's Grove.

But the cats! It was generally believed that a cat, whose kittens Bizz had disposed of in a summary manner, had scratched her eye out; that, added to the natural antipathy of terriers to the feline race, engendered in Bizz the most deadly

hatred to cats, and every cat in the neighbourhood knew it. As long as Mr. Hatchment combined the sale of coke with greengroceries, and was owner of a yard and a shed only a little distance from his shop—of which I shall have to speak hereafter—Bizz had charge of the yard, and it was no uncommon thing to see a dozen cats ranged on the top of the shed, with their hair on end, and their tails like bottle-brushes, all yelling and spitting in chorus, Bizz in a state of insanity, now running along on two legs, then on three, then springing in the air in the hope of catching even the tip of a cat's tail. It was

curious to observe how the different cattish dispositions manifested themselves. One grimalkin might be seen standing with arched back, elevated tail, and nails sticking into the mortar; another crouching like a tiger, with widely-staring eyes, as if waiting for an opportunity to spring on its foe; another moving with a crab-like movement, sly and sidling; another rocking backwards and forwards; but all animated by the same antagonistic feeling towards Bizz. At her bark in Steward's Grove (supposing it only the bark of "kindly welcome" to her master, for she was too determined a dog to be noisy), every cat left off washing her face, or lapping her milk, or caressing her kittens, or even watching the sparrows on the wall, and bristled in a state of warfare. If the poor dog ever had peaceful desires, if she was ever inclined to doze in the sun, she was sure to have her combativeness called into action by the butcher's boy stopping and exclaiming, "Ah! there you are! Let me catch you near our shop again, and then I'll make you remember who stole the sheep's head;" or by the baker exclaiming, "Mr. Hatchment, I'll give you sixpence if you'll give me a fair throw at your dog, and I'll forgive her (after the throw) for the rolls she stole." Ay, Bizz had an ample abundance of foes, and I really believe her only *true* friend was our cook! "Why?" you will say, and in reply I say, "Patience!"

After the little display of cook's eloquence on behalf of Bizz, I determined to walk to Hatchment's, and ascertain *why* he was so anxious to get rid of the dog, which he had often told me was of more use to him than "Mrs. Hatchment, or any two boys he ever employed." And though cook was an excellent creature in many ways, and an admirable cook, yet the fact of her denying her country kept me in continual doubt as to her veracity; whatever cook said, I *felt* the question, "Is that true?"

Mr. Hatchment, however, in reply to my statement of what I had heard, said,—"Yes, it was so exactly, and sorry he was for it; he did want to find a good home for poor Bizz. Somehow Mrs. H. and Bizz had got on bad terms. Mrs. H. was a good woman, and a good wife, though as crooked as a bad *parsnup* about anything that crossed her brain, and Bizz had crossed her brain very often, and she said true, he could not afford to keep the dog any longer."

I could not help smiling at this, for I believed that Bizz had a way of keeping herself. Hatchment understood my smile and continued:—

"Yes, ma'am, so long as I had the shed and yard, which Bizz considered her own, having brought up three litters there, she stayed there, because also, she was chained, which I did out of mercy to the neighbours' cats, and if she did not like the dinner Mrs. H. gave her, why she got no other; but since I gave up the yard, when Mrs. H. does not please her in the cooking, she goes straight to our butcher's and walks off with whatever piece of meat pleases her best, and takes it into Brompton churchyard to eat it quietly. She's as fleet as a roe, and once in the churchyard, she knows the boys dare not follow her; and indeed they don't bother much about catching her, for they know, sooner than have her badly used, I'd pay for the meat, and that's what Mrs. H. can't stand. Last week there was three shillings in the week's bill against Bizz, for sheep's head and trotters. I gave in to the *head*, but "trotters" is what I know the dog's above—Bizz is above trotters!—and the butcher and I had words about it, and Mrs. H. put in her word as well, and she said Bizz or she must leave the house. Now, ma'am, I think it would not be the thing to let Mrs. H. go, and keep Bizz; so, if I don't get a home for the poor animal——" Hatchment was obliged to leave the sentence unfinished, as Bizz had attacked a small boy who was vainly attempting to get at her blind side, which was turned towards a basket of oranges.

"The greatest little thief in Chelsea," Hatchment called him, and then when he saw that Bizz had bruised one of his poor red shanks, without however breaking the skin, the good-natured greengrocer gave him an apple not to cry.

"Please, sir," stammered out young impudence, "I'll hold the other leg to her, if ye'll give me an orange!"

"There never was such a watch," continued Hatchment, after dismissing the imp, with the threat of a sound thrashing; "never! Your yard is too well walled for her to escape, so she could not get into trouble with any of the butchers, and she's equal to any three policemen, by day or night. The corner is very much exposed: poor Bizz, poor brute, she's worth her bit any day."

I asked Hatchment if he had had her from her puppyhood, and then he told me her history as far as he knew it.

FLAMBOROUGH HEAD.

By John Cordeaux.

FEW places on our English coast will so well repay a visit as the noble Yorkshire headland of Flamborough. To the lover of nature it offers many and varied attractions, in the grand scenery of its coast-line, the countless thousands of sea-fowl which, during the spring and summer months, frequent its sea-washed cliffs for the purposes of incubation, and the beauty and variety of the wild flowers which everywhere deck

"The zigzag paths and juts of pointed rock."

To the archæologist it offers an additional attraction in the remains of the famous fortification known as Danes' Dyke.

The best way to see Flamborough is on foot. We shall, therefore, in the course of this paper, take our readers along with us in a walk round the headland, more especially to observe the habits of its numerous tenantry, the sea-fowl. We shall not, however, find them in any great numbers till we arrive at their great haunt, the lofty mural precipices of Specton; for constant persecution has all but driven them from the lower range of cliffs on the southern side of the promontory.

Let us suppose ourselves then, early on some fine summer's morning in July, at Bridlington Quay, a few miles south of Flamborough, properly equipped for a walk,—a stout stick in hand, a good landscape glass slung across our shoulders, and not forgetting a well-filled sandwich-case. We will follow, as near as we are able, the line of coast until we reach the western extremity of that grand wall of limestone rock overlooking Filey Bay,—no easy walk on a warm July day, particularly as it is nearly all cross-country work and over broken ground; and although, looking across the Bay, the two lighthouses placed near the extremity of the headland appear at no great distance, yet, following the line of coast, we shall find it take us six good miles to reach them, and thence ten more to the western end of the Speeton Cliffs.

And now for a few minutes, as we stand here on this north cliff of Bridlington, let us observe the line of coast. How is it that bold promontory of chalk before us retains its proud position comparatively uninjured by the storms of thousands of winters which have broken against it; while the land on which we stand is gradually, but surely, year by year, receding before the encroachments of the sea? It is that the entire length of the Yorkshire seaboard, from Spurn Point to a mile beyond our present position, is composed of what geologists term the "Boulder clay," a dark clay containing some large fragments and innumerable smaller portions of water-worn rocks thickly embedded in its substance. The higher portion of these clay cliffs is capped with fine sands and gravel, and an occasional bed of clay and peat marking a fresh-water deposit,—the site of an ancient lake, long since drained dry by the sea, which has for ages been slowly eating up the land. Thus, in the whole length of this coast, we find no solid rock until we reach this limestone headland. The sea constantly washing the base of these clay cliffs undermines

them, and the rains and frosts of winter cause landslips, breaking off great masses from the top. Thus the land gradually recedes, and the sea marches forward at the computed average rate of two yards and a half in a year. Thus, it is said, two miles have disappeared since the Roman occupation of Yorkshire, one since the Norman conquest. In old maps of the county, villages are marked, the sites of which are now buried "many a fathom deep," and nothing but their names remain to testify that once man lived there. Not far from the present Spurn Point stood the ancient town of "Ravenspurn," a place of considerable importance at a period when Hull was a poor fishing village. Edward IV. landed there in 1471; but Ravenspurn, like many another long-lost Yorkshire village, has left scarce a tradition to mark its site.

The Flamborough promontory is composed entirely of close-grained chalk rock, containing layers of flints. It is the northern extremity of that great reef-like chain of hills which, commencing on the south coast of England at Beer Head, runs northeastward through Suffolk and Norfolk, crops out prominently again in the Lincolnshire and Yorkshire wolds, and finally terminates in the sea at Flamborough.

The mass of chalk which composes the headland is capped with an immense thickness of the "Boulder clay," and this clay contains fragments of nearly all the older rocks, from the immense "boulder-stones" to the small rounded water-worn pebble, ages since floated down on the glacial sea from the mountains of Cumbria and the far north, before the "Wold" hills had finally emerged from the water. As we walk along the cliff top towards Sewerby, we see how last winter's storms and frosts have detached large masses of clay and gravel, which lie in great disjointed masses on the shore. These landslips are already covered with vegetation. Amongst the plants most conspicuous are the "Bladder Campion" and jungle-like patches of the "Giant Horse-tail." Two miles north of Bridlington the chalk rock first shows itself above the level of the coast, and from this point the cliffs gradually increase in height till we reach the head, and thence to Speeton, where they reach their greatest altitude, 436 feet above high-water mark.

Opposite Sewerby Hall the footpath turns across the fields in the direction of the village; but, regardless of the notice which informs us that "all trespassers will be prosecuted," let us keep straight forward. How glorious is the view this fine summer's morning! Early as we are, others are out before us, for the mackerel season has commenced and the boats are out in the bay, with all hands busily employed in line-fishing. Far to the south we see the long line of the Yorkshire coast, till it is lost in the distance beyond Hornsea. From our elevated position we are able to form some idea of the encroachments of the sea, from the time when the coast-line was probably level with the extreme point of the headland.

These sand cliffs are a favourite resort of the Sand Martin, as those small mouse-coloured swallow-like birds are called which are continually passing and repassing us as we walk along.

There is one of their colonies. You see the holes are bored in a narrow vein of sand, running between the chalk and "boulder" clay. These holes they excavate with their sharp beak and claws, occasionally to the depth of two or three feet, and at the further extremity they deposit four or five pure white eggs, in a nest made of hay and feathers. And we may conclude that they will succeed in bringing off their young in safety, for those holes are placed in such a totally inaccessible position as to defy the attempts of the most persevering bird-nester.

But what is that little bird with the bluish grey-coloured back, black and white tail, and the dark streak through the eye, which keeps flitting before us from one stone to another, jerking its tail up and down when it alights, and then flying forward twenty or thirty yards, perching on a stone, and going through the same performance? It is the Wheatear, a summer visitant to this country. We should probably find its nest carefully concealed under some of those large stones which project from the clay, and from under which the soil is partly worked away. It is constructed of hay, wool, moss, and hair, and contains five or six pale blue-green eggs. Formerly hundreds of these little birds were taken with horse-hair nooses by the shepherds on the south-country downs, and sold as an article of food.

We now come to a sudden break in the cliffs, the termination of a deep natural valley, which runs inland, gradually decreasing in depth, and thus trending upwards till lost in the central highland. The crest of the opposite hill is crowned by a low and somewhat broken embankment, the famous "Danes' Dyke;" for to the Danes does popular tradition ascribe this remarkable work, although it is probably of much older date. Whoever were the original constructors of the embankment took advantage of the natural formation of the country, and used this deep and narrow ravine as a fosse to protect the salient face of the work. This valley runs in a line leading nearly directly across the promontory, and about a mile and a quarter from its southern termination is lost in the "Wold." From this point the embankment is made much stronger, and protected in front by a deep artificial ditch, from which the soil has been taken to form the earthworks, still, however, taking advantage of any natural variation in the surrounding country which might add to its strength. Even now in most places, and after the lapse of so many centuries, the work of the original labourers remains so perfect, that, well manned, it would present a serious obstacle to the advance of an enemy. The northern termination of the "dyke" is on the opposite side of the promontory, and it is there carried to the very brink of a precipice 300 feet deep; so that the flank could not be turned except by sea. It is the lines of Torres Vedras on a small scale. The total length of the "Danes' Dyke" is about three miles from coast to

coast. Trees clothe the sides of the trench, adding greatly to the wildness of the scene. At the northern end they are stunted and gnarled, and with branches twisted by the rough northern breeze; but at the southern and well-sheltered termination, they are tall and uninjured. The old earthworks are gay with golden gorse, and light green masses of tall herbaceous plants and bracken, amongst which most conspicuous by its height is the Weld, or *Reseda Luteola*, a plant which furnished our ancestors with a yellow dye. Let us descend into the valley, and climb the opposite hill. Hark to the sweet, wild song of the linnet, as he sits with his carmine breast showing bright in the clear sunshine, on the topmost spine of that gorse-bush. A blackbird rises from the bracken, and dashes deep into the plantation, uttering its well-known alarm note, which sounds to us like the word "chink, chink," quickly repeated. The rabbits are scudding in and out of the bushes; and high over-head a single lark is trilling forth its song of praise. All nature is rejoicing in the bright sunshine of early morning. Mingling with the songs of the birds in one grand chorus, comes the ceaseless murmur of the waves on the pebbly beach. And now, as we climb the height and stand at the foot of the earthen mound, a solitary carrion crow, a very raven in size, rises slowly from the dell, and we wish for a gun to bring the black marauder down. He has been breakfasting on a young rabbit, which we find partly devoured amongst the green bracken at our feet. As he sullenly sails away in the direction of the Sewerby woods, he reminds us of the days when Denmark's grim raven banner floated out from behind these strong intrenchments, over the ranks of blue-eyed, fair-haired warriors, who ravaged the pleasant Yorkshire valleys to the very walls of York. And here they could fall back with their plunder, and renew their strength for fresh inroads, and, with their backs to the sea, their dragon-prowed galleys safely moored in the little bay (now the North Landing-place), wait for fresh supports from their countrymen. Here Ida, the "flame-bearer," and his sons, with a great host of Angles, marched to the conquest of Northumbria. And now let us leave "Danes' Dyke," which we shall cross again to-day at its northern termination, and keep close along the coast, and as near as we can to the edge of the broken cliff. And very picturesque and showy are these broken cliffs of diluvium, for at this season their weather-worn sides are gay with many wild flowers. Here we see bright yellow clusters of the Kidney Vetch, and the Great Yellow Bedstraw, contrasting with the pale pink flower of the Trailing Rest-harrow. There again are the purple heads of the Field Scabious, and the larger ones of the Great Knapweed, with white clusters of the Bladder Campion. Where this landslip has left the top of the cliff with only a slight covering of soil, is a growth of more lovely plants;—the Tufted Centaury, with its delicate pink flowers, thick clusters of the Yellow Stonecrop, creeping along the exposed surface of the rock, and a profusion of pale blue Harebells.

But stay, let us look from the flowers to the sea; for there is a large heavy-looking bird, with outstretched neck, flying swiftly low down near the surface of the water—at this distance, not unlike a wild goose. Now it has settled in the sea, and not more then four hundred yards from our position. Out with our landscape glass, and let us have a look at him as he sits low and long in the water, a very pirate craft in appearance. It is a cormorant. Now he commences fishing, diving under the waves, and often, when necessary, going down a great depth in pursuit of the fish, which seldom escape him. Now he emerges again, but at a considerable distance: you may count thirty to forty slowly, from the time he dives to his re-appearance. He has caught sight, however, of our telescope, which he perhaps mistakes for the barrel of a gun, and is off, with the same low rapid flight to another part of the coast. That little bay which we are approaching forms the South Landing; and thence a road leads across the promontory through the fishing village of Flamborough to the north shore. A number of small boats, used principally for crab-fishing, are drawn up on the beach. In the centre of the bay are a number of gulls; let us bring our telescope to bear upon them, and endeavour to determine their species. You perceive three distinct sorts in the little company. Those four or five large ones swimming somewhat apart, with the yellow bills, are "Herring Gulls;" but further on are several smaller gulls, not unlike the Herring Gull in appearance, but with greenish-grey bills—they are the "common" species. Yonder again is still a smaller one, with a black head and red bill—it is the "Black-headed" or "Peewit" Gull, as it is sometimes called. Those "Peewit Gulls" breed in colonies on the shores of some of the inland "meres," and the eggs are considered a great delicacy. There again are two gulls larger than any we have seen, sitting apart on that "boulder-stone," which has rolled from the cliff top, and now lies partly embedded in the sand, and surrounded by the tide: it is covered all over with trailing masses of the common bladder seaweed. Bring the glass to bear upon them, and you will then perceive that they have the upper parts of the plumage black, except the head and neck, which are white. We know them for the "Great Black-backed," the largest of our British gulls; their wings when expanded covering five feet nine inches from tip to tip. They are of an exclusive disposition; do not mix with other species (generally being found in pairs on exposed portions of the coast); and are by far the least frequently met with. On the waste ground near the landing-place, as also on the road leading up to the village, are drawn up the herring-boats, the property of Flamborough fishermen. All are gaily painted and in order for the herring season, which will soon commence. About the first week in August, the boats are taken down on wheels, launched and fitted out in the little bays known as the North and South Landings, and soon the principal portion of the inhabitants of the little fishing village will be gathering in the harvest of the deep.

After leaving the South Landing-place at Flamborough and climbing the hill, we pass on our left a low mound—perhaps the last resting-place of a Brigantian chieftain—and not far from the tomb of the old warrior, and close to the edge of the cliff, a "third-class target," which a persevering volunteer has constructed out of some old iron plates, the relics probably of a steamer which has gone to pieces on these rocks. Half a mile further, and we stand near the extremity of the headland; and here let us wait awhile, the better to view the grand scene. The extreme point of all we cannot reach, for that is now partly separated from the mainland by the slipping of the upper clay cliff. It represents an immense block of almost isolated rock, of a diamond shape. On its northern side, the ceaseless wash of the waves has excavated a grand natural arch; and in each of the little bays which flank the central mass is an immense column of limestone, which in the course of ages has become detached from the parent wall, marking the slow encroachment of the sea on the hard chalk cliffs. Stretching directly out from the head is a long reef, barely covered at low water, and thickly overgrown with seaweed and tangle, which floats backwards and forwards with the flow of the sea over the reef. The water at a short distance from the coast is a deep green; but close in-shore, the constant friction of the waves on the white limestone is continually rubbing off minute particles of chalk, which gives the water quite a milky appearance. Thus in the course of ages the water wears away the softer portion of the cliffs, leaving those great isolated pillars standing as monuments of its eroding power.

We shall find that this northern shore presents a very different aspect to the more sheltered southern coast, along which we have been hitherto walking; for it has been exposed to the full sweep of the storms of ages, and everywhere on its rugged precipices bears marks of its battle with the waves. Here the coast recedes, forming a lovely bay; there again, standing out in a bold promontory, its sides broken into deep fissures and caverns, in some places worn completely through, forming a giant archway, or like the vaulted roof of a cathedral. Then again, we find, as at the head, great masses of cliff standing solitary, and surrounded by the sea; and there they yet may stand for thousands of years to come to break the wild fury of the northern storms. The base of these cliffs is excavated into deep holes and caves, some of them, like "Robin Lythe's Hole," of great extent and beauty, and which will well repay the trouble and difficulty of exploring. Those heaps of broken spars and planks saved from the waves, remind us of the insecurity and danger of this iron-bound coast. Thanks to the precautions taken, it is seldom we now hear of a wreck. The lighthouse, situated on an eminence overlooking a beautiful bay, is 87 feet high, its light being 214 feet above the level of the sea. The apparatus revolves once in six minutes; it is triangular, two sides displaying a white flash, and the third a crimson one. But when the headland is wrapped in mist and spray, or during the drift of a northern snow-storm, the light would be of little avail to warn off the storm-tossed mariner. To provide for this emergency, a small station has been built close to the cliff, from which an 18-pounder is fired every quarter of an hour. Many of the migratory birds which arrive on our coasts in the winter months, as woodcocks, redwings, widgeons, &c., are picked up dead at the foot of the lantern—dazzled by the light, they dash like moths against the thick glass, and are killed. On one occasion one of these thick glass plates was broken by the force with which a wild duck dashed against it.

But we must press forward, as we have yet a long line of coast to explore. Yonder are a small flock of terns, familiar as they are to visitors at the sea-side, under the name of Sea Swallows; not unlike small gulls in appearance. Mark their mode of feeding as they fly along in line, one behind the other; now one, now another dashes downward, making a visible splash in the sea, but not alighting, and then rising again resumes its flight, each time probably capturing some minute object floating near the surface. How different in their flight and colour are those black-and-white birds, with the long red bills, which, as we approach the cliff, rise rapidly from the water below: by their pied appearance and shrill whistle we know them to be Oyster-catchers. They have been busily cleaving open with their strong bills and feeding upon the mussels on the reef below.

Passing a beautiful bay shut in by lofty cliffs, and containing, near its entrance, two remarkable insular masses of rock, called the "King and Queen," we next come to the North Landing. At the bottom of a steep descent, the northern termination of the road which crosses the promontory, are drawn up a long array of gaily-painted pleasure-boats, in great demand during the summer by the hundreds who visit Flamborough from the neighbouring watering-places of Bridlington and Filey. Perhaps no portion of the coast exceeds in beauty this lovely bay. In the cliffs, both to the east and west, many of the finest sea-caves which penetrate the rocks may be explored. One remarkable cavern, called "Robin Lythe's Hole," is easily accessible at low water. Many years since the rocks about this bay, as also those near the lighthouse, were the resort of thousands of sea-fowl—we may now walk for miles along the coast and see but few, until we reach their last retreat, the almost inaccessible range of the Speeton cliffs.

The rapid decrease of the sea-fowl on this coast is much to be regretted, and is, we are sorry to say, attributable in a great measure to the almost constant persecution of the birds by parties who visit Flamborough during the spring and summer for the sake of "having a shot at the sea-fowl." As the "cheap excursion" trains from the manufacturing districts increase in number, so certainly will the birds decrease. Indeed, it is impossible to walk along the cliffs on any fine day during the summer months without hearing the constant report of guns, fired by men and boys from boats below;

and we are constantly distressed by meeting the so-styled sportsmen on their return from a too successful battue with clusters of Guillemot and Puffin, &c., swinging from their guns. Thus the birds have been driven away from the lower ranges of cliff, and it is plain, if the present senseless and cruel persecution is continued a few years longer, that the neighbourhood will be deprived, in the eyes of all true lovers of nature, of its greatest attraction. Besides the thousands of birds which are thus annually destroyed and carried away by "excursionists," a large number are wounded and disabled, and it is not unusual to see wounded birds struggling in the water unable to rise. This slaughter is carried on at a time when many thousands of sea-fowl have young ones to support and rear; and what must be the fate of the young when the parents are shot? Not satisfied with shooting at them on the wing, we have seen merciless wretches fire into the birds as they sat crowded together on the narrow ledges of rock, totally regardless of the misery and pain which that one discharge alone may cause to the many they will only partly disable and cannot secure. After passing the North Landing-place we shall find the cliffs gradually increase in height, and when we reach the northern extremity of "Danes' Dyke," we look down a precipice nearly 300 feet deep. It is only by keeping, as we have done, along the summit, and following the ins and outs of the coast-line, that we can fully enjoy the grandeur of the scenery. Let us get over the slight fence which seems to protect the cattle from falling over the precipice, and, lying down on the green sward, crawl to the edge and look over. What a magnificent scene! Hundreds of feet below, the green water breaks against the cliff; but at this height the wash of the waves is scarcely audible. Right and left stretch the giant walls of white limestone, their surface scarred and broken by long exposure to the weather, and furrowed and seamed by narrow ledges and ridges, which form secure resting-places for those long rows of Guillemot; while hundreds now are wheeling and screaming far below, dwarfed in size by the distance and the stupendous character of the scenery. Let us try and obtain a better view of the birds: and this we may do by crawling to the edge of a projecting portion of the cliff, which will enable us to look directly down upon them as they sit on the ledges of the opposite rock. Yonder birds sitting nearly upright, with the dark brown head, neck, and upper parts, and the white breasts, are Guillemot, and form by far the greatest proportion of the many inhabitants of the rocks. Their eggs, as well as those of the other sea-fowl, are much sought after as an article of food, and great quantities are taken in the spring from the ledges by the "cliff-climbers," who descend from the summit by a rope; several of the neighbouring villagers obtaining a part livelihood by this dangerous occupation. The eggs of the Guillemot show an almost endless variety in shade and markings, and it is almost impossible to find two alike. Placed as they are on the narrow shelves of rock, without any nest, we may well wonder how they ever retain their position until the young are hatched. Providence, however, has ordered that although they are very thick at one end, they gradually taper to the other, which, compared with other eggs of the same size, is very narrow, so that when disturbed by any cause, they roll round on the small end as on a pivot without falling off. If we carefully inspect those long rows of Guillemot, we may possibly discern one of that closely-allied species (perhaps after all it is only a variety) called the "Ringed or Brindled Guillemot." This bird closely resembles the common one, only differing from it in having the eye encircled by a narrow white ring from which a streak of the same colour extends down the neck. The Ringed Guillemot is considered a rare bird at Flamborough. On the same ledge with the Guillemot are three or four birds, not unlike them in appearance, but with the upper parts black instead of dark brown. The bill, however, is the distinguishing feature; it is much stronger and thicker than in the Guillemot, with a white furrow across it, and a white streak extending from the base of the bill to the eye. This peculiar beak marks them at once as "Razor-bills." We may also know them by their cry, which resembles the word "urr urr," or "orr," while the call of the Guillemot resembles the noise made by a policeman's rattle, and sounds like the word "girrrrrrr."

Yonder, again, are two Puffins or Sea Parrots sitting together, at the mouth of one of those crevices in the cliff. Could we see the bottom of the crevice, we should probably find a single round egg, grey spotted with brown. The eggs which are thus concealed at the bottom of narrow and deep holes are seldom taken by the "cliff-climbers." What a grave look the birds have as they sit facing each other, their great red, yellow, and blue beaks giving them quite a top-heavy appearance. Those gulls with the grey-blue backs, white head, wings, and tail, so many of which we see sailing slowly backwards and forwards, halfway down the cliff side, may be easily recognized by their cry, which somewhat resembles their name, "Kittiwake." The Specton rocks are a well-known breeding-place of the beautiful Kittiwake gull. We may see some of the young birds on the ledges below; and so unlike are they to the old birds in plumage as to have been taken for a distinct species.

That blue bird, with the white patch between the tail and back, which has just dashed over the cliff top, is the "Rock Pigeon," and nearly resembles our well-known domestic "Blue Rock." There is little doubt that all our domestic breeds of pigeons have sprung from the wild Rock-doves. They breed in considerable numbers in the sea caves below, and from their wild and shy nature and rapid flight fall less readily victims to the roving gunners. The eggs, which exactly resemble those of the domestic bird, are placed in the most inaccessible parts of the caves, in shallow nests constructed on ledges of the rock.

We have now reached the highest part of the Speeton cliffs; from this point the chalk range

runs inland, and underneath crop out the blue clays of Speeton, rich in fossils. From this point we have a magnificent view of Filey Bay and the white houses of the distant crescent, beyond which, running out into the sea, is the long sandstone promontory known as the "Brig."

Here our ramble for the present must terminate. Over the hill on our left is the little village of Speeton from whence we can take the rail to Bridlington, or, if we prefer it, follow the highroad, and continue our walk across the Wold hills and through Bridlington proper to the Quay. Let us, however, sit down awhile, and, after eating our sandwiches and lighting the friendly pipe, watch the blue smoke curling upwards and whirling away in little rings and eddies in the summer air. Sitting here on this hill-side, what a glorious prospect of sea and land stretches before us; from this spot we can overlook nearly the whole of the promontory. Yonder are the lighthouses, and nearer the little village of Flamborough, with its red-tiled houses and grey weather-beaten church. We cannot at this distance distinguish the old castle, little of which remains to remind us of the former power of the ancient family of Constable. Nearer still we can trace the line of the Danes' Dyke, with its groups of plantations. Far to our right is the sea and Bridlington, and still farther to the right the range of the Yorkshire Wolds. Now we look across a highly-cultivated country; green turnip-fields and waving corn have replaced the gorse commons and heath-covered hills; and the Stone Plover and Great Bustard have given place to the Partridge and Wood-pigeon: yet the natural features of the country remain much probably what they were centuries ago. Brigantes, Romans, Danes, and Normans have all lived and toiled and fought on the land before us, and have passed away; and we, sitting here on this hill-side this summer afternoon, are the representatives of the mixed races, units in this great working toiling nation, too glad to get away for a few days from the toil and noise of cities, to return strengthened and refreshed for our work. After all, Nature is the best physician, and

> "If thou art worn and hard beset
> With sorrows that thou wouldst forget;
> If thou wouldst read a lesson that will keep
> Thy heart from fainting and thy soul from sleep,
> Go to the woods and hills! No tears
> Dim the sweet look that Nature wears."

THE PRINCIPLES OF GOOD TASTE IN DECORATIVE ART.

By J. B. Waring, F.R.I.B.A.

AMONG all the subjects a writer could select for an essay, there is perhaps not one which is more open to criticism and dispute than that of taste. The old classical maxim, "de gustibus non est disputandum," is just one of those assertions which immediately lead to a discussion; in which both parties insist on the cogency of their respective arguments and conclusions, because both *feel* them so vividly, however incompetent they may be to reason on them logically. Whilst admitting, then, that in a certain sense, each individual taste, amongst a great variety, may be right, and fitted for the person who adopts it; yet among all these various expressions of perceptive power, some are undoubtedly right, some wrong; and although tastes may differ to an infinite extent, and we should never dream of laying down infallible rules for their guidance, yet we would point out, that certain important underlying *principles* are applicable to them all, and are the only true tests by means of which we can decide as to what extent each particular taste is bad or good. In a broad and general sense, we hold that good sense and good feeling must form the foundation of all good taste, whether it is evinced in morals and manners, in fine or in decorative art; and although these two fundamental qualities are not absolutely requisite in matters of æsthetic taste, yet they must not be absent if that taste is to receive its highest development. For it is certain, that though some persons are born with more natural sensibility in art than others, yet is it a quality, even with them, to be disciplined, educated, and improved; and Burke, in his introduction to "The Sublime and the Beautiful," justly remarks that wherever the best taste differs from the worst, he is convinced that the understanding operates, and nothing else, and that men of the best taste by consideration come frequently to change those early and precipitate judgments which the mind, from its aversion to neutrality and doubt, loves to form on the spot.

> "It is known," he continues, "that the taste is improved exactly as we improve our judgment; by extending our knowledge, by a steady attention to our object, and by frequent exercise. They who have not taken these methods, if their taste decides quickly, it is always uncertainly; but they who have cultivated that species of knowledge which makes the object of taste, by degrees and habitually, attain not only a soundness, but a readiness of judgment, as men do by the same methods on all other occasions."

All the great writers on the subject, ancient and modern, insist on the necessity of cultivating taste before it can be termed good and be trustworthy; yet nothing is more common at the present day, than a ready presumption and a thorough self-satisfaction in deciding on matters which require in truth the utmost delicacy of perception, and can only be properly judged of by persons of special education in art, and who have undergone that discipline which professional study requires.

Although we admit that many foolish and

frivolous persons are met with, who, untrustworthy in all other matters, still evince much good taste in their houses, in dress, and in ornaments; yet this is but a superficial quality, and, unless combined with good sense and good feeling, leads only to a mere sensual perception of external fitness in form and colour, in the lowest departments of art. But such as these, we may be sure, would never command attention or respect for their decisions in the Fine Arts or in the cognate realms of philosophic inquiry and criticism. When sensibility is combined with the power to create and execute, it constitutes what is termed genius: when it is combined with sound judgment and good feeling, we meet with good taste; and, as Goldsmith has tersely put it in his Twelfth Essay, both, in their degree, are "composed of Nature, improved by Art; of feeling tutored by instruction." Sir Joshua Reynolds, also, in his seventh discourse, combating the idea that taste is a natural power of selection in every individual, and not to be gainsaid, declares that, if such were the case, "the arts would lie open for ever to caprice and casualty, if those who are to judge of their excellences had no settled principles by which to regulate their decisions, and if the merit or defect of performances were to be determined by unguided fancy." These observations of writers on art for whose judgment, knowledge, and taste we have the very highest respect, though originally intended to apply to the fine or liberal arts, are equally true as regards matters of taste in ornamental design.

In all subjects of this description, harmony, or fitness of the parts to the whole, forms an essential requisite. Good sense, also, is absolutely requisite in their general design, and good feeling is shown in their special application.

After these opening remarks on Good Taste in general, we proceed to consider its constituents in matters of decorative art. Mr. M. Digby Wyatt, in a very excellent lecture on "The Principles which should determine Form in the Decorative Arts," has briefly summed them up as consisting in Variety, Fitness, Simplicity, and Contrast. To these we would add, as of the highest importance, Harmony. Other qualities, of a more material and technical nature, which we have always to consider are Form, Colour, and Effect; and in these particular constituents of design it is that we seek for the qualities first enumerated, and, according to the presence or absence of them, we are justified in determining how far any work under notice is characterized by good or bad taste.

The main points which lead to the production of works evincing a correct taste, however widely they may differ in themselves or in their styles, are as follow:—

In the designer, a good natural feeling or sensibility in matters of Form, Colour, and Effect, combined with good sense.

In the work itself, simplicity yet variety, contrast and yet harmony.

The application of all these qualities and methods should logically be the province of the true and perfectly educated architect. It is with great pleasure that we quote *verbatim* the sensible and earnest remarks of Mr. Owen Jones; who, in his introduction to the "Handbook of the Alhambra Court, at Sydenham," forcibly points out the incongruity of "Greek porticoes, nondescript internal putty decorations, Louis Quatorze furniture, cinquecento ornaments, floral papers and floral carpets, in a London mansion of the nineteenth century." "The decorative arts," he continues, "are of one family, and must go hand in hand with their parent, architecture; the effort to revive the one will help the other."

"In all ages but our own, the same ornaments, the same system of colouring which prevailed in buildings, pervaded all other works, even to the humblest. . . . It is far different with ourselves. We have no principles, no unity. The architect, the upholsterer, the paper-stainer, the weaver, the calico-printer, and the potter, run each his independent course; each struggles fruitlessly; each produces in art novelty without beauty, or beauty without intelligence. . . . Men do every day, and every hour of the day, place their *intuitive* knowledge on questions of art in opposition to the opinions of those who have made them their especial study. This can never be prevented. Art is the patrimony of all, but it is the more necessary that it should be regulated. . . . No improvement can take place until all classes, artists, manufacturers, and the public are better educated in art, and the existence of general principles is more fully recognised."

In these observations we cordially concur, and would especially plead for extended education amongst the people, in matters of art, by means of schools in which all branches of fine and industrial art may be taught, and by the publication of cheap standard works on such subjects; among which, besides those already noticed, we recommend Mr. W. Burges's "Cantor Lectures," Dr. Dresser's "Art of Decorative Design," and the Reports of R. Redgrave, R.A., on the Exhibitions in London and Paris of 1851 and 1855. The general principles laid down in the last work are excellent, though at times perhaps too rigidly enforced. For example, the author would not allow the constructional forms of one material to be applied to another; therefore, the arch form suitable to stone or brick, would be considered inapplicable to wood. It is clear that, if such a doctrine were carried out thoroughly, architectural design in iron and wood must become monotonous and poor indeed. We note this instance specially, because its adoption has led to much poverty of design, in wood particularly. The round and semicircular forms, it should be remembered, are not *only* constructional, they are general throughout Nature from the shell to the rainbow; and are, above all others, ornamental in character and fitted for decorative purposes, as may be seen from examples in all styles of art. Originality of design mainly depends on freedom of individual action; and in matters of taste, after a proper education has been obtained, each artist becomes a law unto himself, and must stand or fall according to the value and merit of his work.

In future numbers we propose to give illustrations of the principal processes used in the ornamentation of buildings, furniture, &c., representing examples beautiful in themselves, interesting to the public, and useful to decorators generally.

ON SKETCHING FROM NATURE.

By Aaron Penley, Professor of Landscape Painting at the Royal Military Academy, Woolwich.

No. VI. GROUP OF FIR TREES DRAWN FROM NATURE.

WITH the new year I had almost been induced to commence a series of studies more elementary in character than any as yet introduced into the pages of Nature and Art; but upon more mature consideration, it appeared to me that perhaps it would be better to steer a middle course, and meet the wishes of the general public, than to address myself exclusively to the more limited class who practise and delight in water-colour drawing. It is gratifying to find there are so many to whom this work is such a source of pleasure, and who look for its periodical publication with considerable interest; and I cannot but infer that this is the fact, from the numerous letters constantly received from strangers, relative to my several contributions with the accompanying instruction.

I confess I doubted whether the reproductions of my original drawings would be presentable, so many thousands having to be printed, and by the steam press too; but it is encouraging to find this difficulty better and better overcome by the extreme care and study exercised in making the means sufficient to the end. This is very evident from the great improvement in the colouring of the last subject, where the tints, with one exception only (the green tint on the shadowed side of the hut, which should have been more grey), are really good, and admirably suited for the learner to copy. The sky and distance are quite satisfactory. It is, I think, due to those who seek for guidance and instruction from these examples, that I should express much confidence in anticipating increased truthfulness in every succeeding number.

The present subject is of a different character, being such as I have been solicited to introduce by subscribers, consisting only of a group of Fir Trees, the like of which may be met with in almost every belt or plantation of the same species. It was drawn upon the spot, and selected for the clear manner in which the light and shadow were developed, giving to each branch, or portion of it, an individuality peculiarly its own, and yet so expressed as to favour breadth of effect and harmony in the entire group. Such "bits" or "studies" require but little time to produce, although nothing can be more useful or profitable than a sketch-book filled with the different classes of trees presented to us in our every-day walk.

I much recommend the practice of carefully and freely drawing each tree with the black-lead pencil, especially with reference to the main stems, noticing well their direction or inclination from the perpendicular, and how the several lines affect each other in giving a graceful disposition of *form*, because it is only by a due observance of these combinations that an impression of elegance and refinement can be conveyed. It is a matter of importance to the general effect, that the bearings of the principal lines should be studied and remarked upon. For instance, it is as well to note, if the perpendicular stem of one tree is accompanied by another that is taking an angle or curve in a certain direction, what influence the change of line has upon the eye; whether it is, or is not, too abrupt; or if the two compose so agreeably as to give a pleasing effect. I like much to linger before groups of trees, young or old, whether clothed or not clothed with foliage, and by change of position to see the many varieties of forms they take, and which of the many would produce the most pleasing composition. There is real pleasure in this—much to be learnt and much to be put in practice. Lessons may be had in many localities whence lessons could scarcely be expected to be gleaned, and our daily converse with a common-place scene may be thus fraught with increased interest and pleasure.

The ability to draw naturally leads to observation of detail and generalization, it being evident that this cannot be exercised without a corresponding reflection upon everything presented, as to construction, growth, character, and use. How far this is desirable, every one must judge for himself. I can only say, that to myself the enjoyment is beyond expression; and often when walking over what would be considered a monotonous and dreary plain, with a canopy of dull leaden clouds, I am struck with beautiful undulating lines, varieties of tone and tint, with receding distances and aërial perspective, that produce much to be admired, thought upon, and studied. The infinitude of Nature demands the highest mental exercise and the perfection of Art, and we only are to blame if we do not see in her every phase something (I would rather say everything) from which to glean instruction, and to derive contemplative pleasure.

In writing thus, it must be clearly understood that the motive is to lead *others* to exercise a similar attention to Nature in her generality, and not to suppose that it is only upon scenes of grandeur and acknowledged loveliness that our admiration should be called forth. Doubtless the character of such favoured spots is calculated, from its exquisite combinations, to arrest the attention of the most unobservant; but it is also from every description and feature of landscape, as well as from various accidental groupings of figures, cattle, trees, buildings, vessels, &c., that the lover of Nature and Art should derive constant delight combined with instruction. Something can be gathered from all we see, if the information conveyed is really sought for.

In commencing the outline of the present group

of trees, the central stem should be drawn first, noticing carefully the direction of inclination from a perpendicular line. This *must* be correct. After this, give the stem nearest to it to the right, placing a dot at the proper distance for the bottom, and another for the top. By this plan the lines cannot fail of being true in position. The tree to the left must follow, by placing the dots both for the bottom and central part of the stem at its junction with the lower cluster of foliage; then the branches from its right side. The outer stem to the left may also be drawn after the same manner, and afterwards that to the right, with the several leading branches; those more receding can now easily be adjusted, by observing the direction in which they lean.

In a previous number I gave instructions for drawing trees, precisely after the same manner as above; but it is desirable for pupils that the method of producing outlines should be constantly brought before them.

The foliage of the nearest and central tree should have its several forms and clusters completed first; then the tree to the left; and afterwards the small one to the right, as well as the rest of them mingling behind. In the original drawing the whole of the shadows were *pencilled* in firmly and distinctly, with close and rather long lines, but the distant shades were more loosely given. In sketching from Nature, it is always as well to adopt the most ready means of producing the effect, for which I find the assistance of pencilled shadows extremely serviceable.

When the shadows are finished, and the several characteristics of the stems, with their limbs and knotty projections, are correctly placed, the colours may be introduced, by washing them in without hesitation, not being too particular to take them up to the exact markings of the outline. This, indeed, has to be avoided, to prevent stiffness or the semblance of solidity, instead of multiplicity of leafage.

In the example, the sky was washed in at the last, in order that the lights might be so placed as to render the effect agreeable, as well as valuable to the group, and give (what should always be sought) breadth. All the colours were put on in rather a liquid condition, and the brush so filled as to impart them freely, without being blotchy or overcharged. It is a good plan to try the colours first upon a spare piece of paper, to judge of the tint, and practise the manner of touching before proceeding with the drawing. This will insure a greater chance of success.

Colours to be employed,—for the

Sky—Cobalt.

Clouds—Cobalt, sepia, and a very little lake.

Foliage—Gamboge, indigo, lake; but the trees behind must have cobalt added, to give a more vapoury tone.

The colours mentioned above are to be used in combination, taking more or less of one than of the others, as the character of the tones may require.

The next subject will be a lake scene.

ON TIN.

By W. B. Lord, Royal Artillery.

IT is not our intention to use this title figuratively or in its popular sense, as by so doing we should be committing ourselves to a task which we have no intention of performing, viz., that of explaining how the "world's great main-spring" acts on the countless "wheels within wheels," which move the puppet man from pole to pole, and send him either leaping in the air or grovelling in the dust, just as the gold and silver strings with which he is bound may chance to vibrate. We shall therefore, in passing, just touch lightly on the materials from which some of these "strings" are made, contenting ourselves with "tin" in its literal sense, leaving "metal more attractive" to those who prefer its fascinations. It is both curious and interesting to trace the operation of those wise and inscrutable laws which govern the spread of civilization, and to mark how some coveted production, to be obtained only in a far-off land, sets the human tide flowing in that direction. The vast tract known as "Rupert's Land," constituting the Hudson's Bay Company's territories, might have remained for ages the hunting-grounds of the savage, had not the abundance of fur-bearing animals there discovered directed commercial enterprise to their vast stores of natural wealth, and thus, step by step, led to the important position at present occupied by those regions. The chance discovery of gold in California by Captain Sutter, and later on in Australia by Hargraves, are more recent and familiar examples of the same cause of progress; and there is no doubt that the discovery of tin in the Scilly Islands, by a band of wandering Phœnician voyagers, led to a repetition of their visits, and ultimately to the establishment of a regular trade between them and the inhabitants of the western extremity of England. We are informed that, about 600 years before Christ, Pharaoh Nechao, king of Egypt (the same who slew Josiah, king of Judah), ordered some Phœnicians to set out from the Red Sea, to go round Africa, to pass by the Straits of Hercules, to penetrate into the northern seas, and to bring him an exact account of the voyage. About this time, therefore, if not before, it is not unlikely that the Phœnicians, finding, by the voyage of their countrymen, that the western or great Atlantic Ocean was not so tempestuous and unnavigable as their forefathers had taught

them to believe, were either then or soon after tempted to undertake a northern voyage; and coasting along the banks of Spain and France might first discover the British Isles, and, upon discovery, begin to trade, which was the principal end of all their voyages. The term "Cassiterides," so often applied in old writings to the localities from which the tin was brought, appears to apply to the Scilly Islands, the coast of Cornwall, and probably to the western portion of Devon, just as though constituting one group of islands, for which, by the discoverers and early visitors, these apparently sea-girt stretches of land were no doubt taken; and it appears probable, as Bochart states, that the word Britain was derived from "Baratanac," the name given to tin in the Chaldee and Arabic languages, adopted also by the Phœnicians. It has been argued, that, as the whole of England was included under the head Britain, the fact of tin being found in such a limited portion of it could scarcely have conferred a name on the entire island and its dependencies. It must be borne in mind, however, that in all probability the Scilly Islands, and perhaps the extreme west of Cornwall, were the only portions of England visited (at least for some considerable period) by these early pioneers of commerce.

From the scant nature of ancient records on the subject, no very precise idea can be formed as to the state of civilization in which our forefathers were found on their first discovery; and however humiliating it may be to look back on the past, it is much to be feared that the official report given of the "manners and customs" of a certain tribe of North American Indians, by an officer sent on a mission amongst them, would have equally applied to the aborigines of the Cassiterides. "*Manners*," wrote he, "they have none, and the *customs* which prevail are of a very unpleasant character." Savage man—whether hunting in the prairies and forests of the Far West, roaming amongst the huge ferns of New Zealand, or, with matted hair and grotesquely painted skin, dancing a wild corroberry, demon-like in the fire-light beneath the gum-trees of Australia—can look but to one inevitable future; and whether near at hand or far off, just as surely as the arrow shot into the air returns to earth, so surely will time, trade, and civilization sweep him, step by step, from the face of the globe, to give place to new races, leaving, as ages roll on, mere scraps of tradition, buried weapons, and rude barbaric ornaments, as traces of his past existence.

The articles of trade brought by the Phœnicians, viz., salt, brazen or bronze wares (which would include tools, weapons of war and the chase), and crockery, were exchanged with the natives for tin, lead, and skins. The tin, in the form of granules and water-worn pebbles of the ore (*oxide of tin*—for, except in very rare instances, it is not found native or malleable), was obtained by roughly washing the beds of the rivulets and water-courses, much as the *tin-streamers* of the present day collect it. The marshy valleys and moorland tracks between the granite hills also yielded a rich harvest of tin to the ore-seekers, as for countless ages such spots have been the natural depositaries into which the heavy granules have been washed and drifted by the floods which have helped to break up and disintegrate the matrices in which they were originally imbedded.

So large is the quantity sometimes associated with this broken-up detritus, that we have often heard it asserted by old and experienced tin-streamers, that unworked ground had been known to yield from the space covered by an ox, when laying on it, enough tin to pay for the animal. It has, however, become extremely difficult to find tracks of tin-ground unexplored, numbers of those now undergoing treatment have been streamed before, and are, therefore, called "old men's" workings. Minute granules of gold are occasionally found associated with the fine tin, and we have seen small quills used by the men in which to hoard them. A pin with a moistened point is usually made use of to withdraw the precious particle from its baser associates. Before a regular system of underground operations were had recourse to, there is no doubt that a large quantity of ore was extracted from the soft granite formations in which minute veins or *string courses* are frequently found.

The ease with which open cuttings in the sides of hills could be worked offered strong inducements to extract the mineral in this way. Diodorus Siculus appears to have been thoroughly aware of its being thus found. "These men" (the tinners), he writes, "manufacture the tin by working the grounds which produce it with much skill; for, though the land is rocky, it has soft veins running through it, in which the tinners find the treasures which they extract, melt, and purify. Then shaping it by moulds into a cubical figure, they carry it off to a certain island lying near the British shore, which they call Ictus. For, at the recess of the sea between the islands and the mainland, the passage being dry, the tinners embrace the opportunity and carry the tin over in carts to the Ictus or port; for it must be observed that the islands which lie between the continent and Britain have this peculiarity, that when the tide is full they are real islands, but when the sea retires they are so many peninsulas. From this island the merchants bring the tin of the natives and export it into Gaul, and finally through Gaul, by a journey of about thirty days, to the mouth of the Rhone."

The source from whence this much coveted treasure was obtained by the Phœnician traders was long by them kept a profound secret, fearing lest, by its becoming known to the Romans, the trade would become too general and less remunerative to themselves. Speaking of the tin-bearing islands, Strabo says—"From these islands the Phœnicians had their treasures of tin, and were exceedingly jealous of their trade, and, therefore, so private and industrious to conceal it from others, that a Phœnician vessel, thinking itself pursued by a Roman, chose to run upon a shoal and suffer shipwreck rather than discover the least track or path by which another nation might come in for their share of so beneficial a commerce." It is said that the captain's patriotism was, on

returning to his own country, rewarded by having the whole of his loss made up to him from the public treasury.

The uses to which the tin obtained from the natives by the Phœnicians was applied were exceedingly numerous, as not only were nearly all the tools, cutting instruments, and weapons of war made of bronze (an alloy of copper and tin), but the fetters of prisoners and the mirrors of the ladies were of this material. Mention of these latter articles is made in the twenty-eighth chapter of Exodus, eighth verse—"And he made the laver of brass, and the foot of it of brass, and the looking-glasses of the women." These looking-glasses, or mirrors, were in common use amongst the early Egyptians, who usually carried them in their left hands to the temples when attending worship. On the Jewish people quitting Egypt, it is probable that they carried these mirrors, together with their little ornaments and musical instruments, with them—

'Mid the strings of the harps
They hung on the trees,
The sad wind whistled wearily.

From very early ages the Phœnicians were famed for their skill in the art of dyeing, and there appears some doubt as to whether the crimson or scarlet colour spoken of as the Tyrian *purple* and held in such high estimation by the ancients, was not produced by the use of a solution of tin, rather than from a shell-bearing mollusc, much as modern dyers use it to obtain those colours permanently in stuffs and woollen cloths.

There are several islands on the Cornish coast, from which the tin might have been shipped off as described. St. Clement's Isle off Mousehole, St. Michael's Mount, and Love Island were all well adapted for the reception of the mineral, or the ingots produced by smelting it; but the weight of evidence is in favour of St. Michael's Mount being the principal port of shipment, and the *Ictus*, referred to by early historians. Mr. Edwards, who has devoted much attention to the question, maintains, with much apparent reason, that, by an error in the translation of Diodorus, the name has been changed, and that *Iktin*—the ancient Cornish for *Tin Port*—is the true rendering. Be this as it may, there can be no question that many of the statements made by Diodorus have been fully substantiated by discoveries and investigations. The massive block of tin dredged up near St. Mawes, at the entrance of Falmouth harbour, is of such a remarkable form, and corresponds so exactly with the description given by him of that exported by the Phœnicians, that we give a translation of his account.

"The inhabitants of the Promontory of *Belerium* [the most western part of Cornwall] cast the tin into the form of *astragali*." This *astragalus* form is best understood by calling to mind the shape of a common knuckle-bone, or the cross section of the truck wheel or sheave of a block, which represents the ingot. An exact model has been deposited in the Royal College of Mines, in Jermyn Street. Its weight is 65 lb.; length, 2 feet 11 inches; width, 11 inches; and thickness, 3 inches. The upper surface is perfectly flat, and the under side of a slightly rounded or boat form, forked at each end. This would admit of their being conveniently placed on the bottoms of the boats or coracles used for their transport. The four handle-like projections would serve to carry them by, just as a hand-barrow is borne. These would also form most convenient points of attachment for the lashings of the pack-saddles, on which (in pairs) they were carried by mules or horses the thirty days' overland journey from the coast of France nearest to Britain to the mouth of the Rhone, where they were again shipped and conveyed to *Gades* or Cadiz, the great emporium of the tin trade in those days. Thus writes Diodorus, just before the Christian era, B.C. 8:—"The Phœnicians in ancient times undertook frequent voyages by sea in the way of traffic, as merchants, so that they planted many colonies, both in Africa and in the western parts of Europe. These merchants, succeeding in their undertakings, and therefore growing very rich, passed at length beyond the Pillars of Hercules into the sea, called the Ocean; and first they built a city called *Gades*, near to the Pillars of Hercules, at the sea-side, on an Isthmus in Europe." In Ezekiel, xxvii. 12, the early trade in tin and other metals is thus mentioned:—"Tarshish was thy merchant by reason of the multitude of all kinds of riches; with silver, iron, tin, and lead, they traded in thy fairs."

Homer informs us that Cinyras, king of Cyprus, presented a corslet to Agamemnon, which he wore on his departure for the Trojan war. "Next he placed around his breast a corslet which Cinyras once gave him to be a pledge of hospitality, for a great rumour was heard at Cyprus that the Greeks were about to sail to Troy in ships, wherefore he gave him this, gratifying the king. Ten bars indeed [of the corslet] were of dark cyanus,* twelve of gold, and twenty of tin, and three serpents of cyanus stretched towards the neck on each side, like unto rainbows." On the tin deposits of Britain becoming known to the Romans, there is little doubt that they at once availed themselves of the discovery, and employed the natives to mine for them; a medal of the reign of Domitian, together with implements, &c., of the early Roman period, found in an ancient tin mine, being strong evidences of Roman supervision. Improved and more extensive operations appear to have been conducted under Roman rule, and large quantities of tin were for a very long period obtained for the purpose of alloying with copper to form the bronze for which they were so celebrated. Kenrick, in speaking of it, says,—"This bronze, which is one of the oldest alloys of copper we are acquainted with, contains about ten or twelve per cent. of tin." It has been found by analysis that this is just the composition of the bronze instruments found in the sepulchral barrows of Europe, of the nails which fastened

* Lead.

the plates to the roof of the treasury at Atreus, in Mycenæ, and of the instruments found in the tombs of ancient Egypt.

The bronze coins and ornaments found by us during our researches amongst the ruins of the "House of Lamachus," in the ancient Chersonesus, are almost identical in composition with the tools and instruments discovered at Thebes; whilst the weapons of war and the chase, brought to light on opening the tumuli, with which many of the hills and breezy downs of England are covered, contain the same formula.

The Saxons do not appear to have taken a stand in Cornwall until the reign of Athelstan; and but little interest was taken in mining either by them or the Danes, and no great impetus seems to have been given to it until after the Norman conquest. A great portion of the trade was then conducted by the Jews, who, no doubt, contrived to enrich themselves almost as much as the Phœnicians had done in their day. King John appears to have interested himself in the welfare of the tin miners, and to have granted charters for the better regulation of mining operations. Edward I. seems to have aided in confirming some of the measures instituted by John, which led to the separation of the Devonshire from the Cornish miners.

The leaden seal of the ancient tinners of Cornwall, found in a field near Bath, and now in the museum of the Royal College of Mines, in Jermyn Street, was probably of this period; and from both sides being exactly alike, it has been surmised that it was struck with a view to its attachment to some important charter relating to tin mining. The two figures represent "tinners," one with a pick and the other a shovel, working in their *stream work;* the running water being indicated by the lion's head between them (not an unusual emblem amongst the old gem cutters). The legend may be thus rendered,—✠–S'COM–VNITATIS STANGNATO: CORNVBIE. No medal or seal like it is, so far as we have been able to ascertain, in existence; and how it should have found its way to the vicinity of Bath is a problem open to the curious for solution. As time passed on discoveries continued to be made, and more extensive subterranean workings conducted. Regular lodes of tin, associated with other metals, were from time to time discovered, and the extraction and treatment of their products gradually improved on; and although other countries possessed tin mines, its exportation continued to be considerable. Yet, strange to say, all the so-called tin plates (which in reality are only thin iron sheets dipped in molten tin), used in this kingdom up to 1665, were sent from Bohemia or Saxony; and although about this time an attempt was made to introduce the manufacture regularly, and one Andrew Tarranton, who was sent abroad for the purpose, succeeded perfectly in discovering the process, and manufacturing many thousands of plates on his return, superior to those imported, yet no manufactory was established until between 1720 and 1730, when the first was put in operation at Pontypool, in Monmouthshire.

The thin sheets of iron, after being rendered perfectly clean and free from adhering oxides, by diluted acids and bran water, are dipped in molten tallow, and then plunged into a bath of fused tin, which adheres to and completely covers them. Tin is a most important ingredient in the manufacture of pewter, gun-metal, bronze, &c. A vast number of small wares, such as hooks, handles for pots, tacks, &c., are coated with tin to preserve them from rusting. Tacks are tinned by first cleansing them in diluted acid, then placing them with fragments of the metal and sal ammoniac in an earthenware bottle over a strong charcoal fire. On the coating of tin being complete, they are washed and finally dried in hot sawdust or bran. Nearly all the cooking utensils throughout the East are of copper, and it is requisite, in order to avoid the unwholesome qualities of that metal, to tin their interiors.

This is done by first rubbing the surface bright, then heating it over the fire, and when sufficiently hot rubbing the fused tin with powdered resin quickly and evenly over it; a handful of cotton or linen rag forms a convenient rubber. A mineral known as *wolfram* is often found associated with the ores of tin, and from its gravity and peculiar character, being a double tungstate of manganese and iron, great difficulty was experienced by metallurgists in separating it. Mr. Oxland at last solved the difficulty by treating the ores in the furnace with carbonate of soda. A chemical change at once took place. The tungstic acid seized on the soda and formed a tungstate of soda, valuable as a *mordant* or fixer of dyes, whilst carbonic acid was set free, and the scoria or slag carried off the other elements of the objectionable compound; so chemistry steps in to aid the arts. There are a great number of sources now from which tin is obtained, amongst which may be mentioned Banca, the trade of which colony belongs to the Dutch, Chile, Mexico, Australia, Spain, Bohemia, &c., &c. The mountain ranges between Galicia and Portugal are exceedingly rich in the ores of tin, only needing commercial energy and capital to render them highly remunerative. Many of the names relating to tin and its treatment have been handed down from very remote ages to the present day. The lord or landowner's dues are still spoken of by those connected with tin mining, as his *dish*, from a dishful of ore, out of every sixth or eighth (according to agreement), measured from the pile of ore, being laid aside for his benefit. The term *Jews' house tin*, applied to the masses of roughly smelted metal occasionally discovered by the miners in old workings, was first given from the Jews having in early ages the supervision of the furnaces. The tin coinage, as it was called from the French word *coin*, a *corner*, consisted in the chipping off of one corner from each block of metal for assay, before the arms of the Duke of Cornwall were stamped on them; up to 1858, a duty of four shillings per cwt. was levied as a royalty due to the duke. This inconvenient and troublesome custom was abolished during the present reign, and a perpetual annuity, grounded on

a ten years' average, substituted. Few metals used in the arts have a wider range of usefulness than that now under consideration. The cannon which thunders forth a nation's triumph, the bells which ring out the wedding peal so joyously, or with solemn note peal the last *requiem* of the departed, are indebted to tin for their sonorous quality. The penny you cast to the crossing-sweeper, and the half-pint measure containing the porter he probably buys with it, have tin in their composition, as have the pipes through which it passed, the engine by whose mechanism it was raised, and the tap which governed its flow; the tea-kettle, too, as it sings cozily on the hearth, as if from sheer self-satisfaction at the brightness of its own burnished jacket, owes the privileged position enjoyed in the snug warm corner to *tin*, as do many human tea-kettles who have cause to sing as contentedly as he.

DESCRIPTION OF AN EGYPTIAN STATUE LATELY ADDED TO THE COLLECTION IN THE BRITISH MUSEUM.

THE statue is in gritstone, and represents a young man standing, a son of Rameses II. It is 50 inches high on a base of 6 inches. He has no clothing except the apron round his waist. The left leg is forward. Both arms and the fingers hang straight down, and they press to his sides two poles or standards as tall as himself. The head of one is a cylinder ornamented with two asps; the head of the other is a group of three small standing figures now broken, a goddess with two gods. On each standard is the name of Rameses II. (See fig. 1.) The square pillar which supports his back had been mended in two places, probably by the original sculptor. On this and on the base are several lines of hieroglyphics stating that he is the king's son. The stone is hard, and on the figure highly polished, but disfigured in two or three places by coarse pebbles.

Fig. 1.

His hair is a crop, without the large lock peculiar to the king's sons, shown in the bas-reliefs: the beard short, and now broken away. The muscles are remarkably well marked; better so, perhaps, than on any other statue of that age. The face, nose, and all the limbs are delicate and youthful; the chest wide, the waist slender, the stomach rising with a swell; the knee good, showing the division between the patella and the tibia. The ankle is less good. The nails are scarcely marked on either fingers or toes; the left thumb is too short. The right leg is badly formed, from the difficulty of reaching it with the chisel, as it is withdrawn into the recess between the standard and the wall which joins the left leg to the supporting pillar. The statue is quite perfect—except for the loss of the beard, of the three figures on the top of one of the standards, and of one of the two square pieces with which the pillar behind had been repaired, and for a hole broken through the wall which joins the right-hand standard to the supporting pillar.

The delicate youthful face is clearly meant for a portrait, but perhaps without close approach to a likeness, as the manly beard which once adorned the chin proves that some departure from exactness was allowed to the sculptor. But, nevertheless, the face, and indeed the whole figure, has less of the conventional stiffness than is usual in the Egyptian statues. The shoulders, the arched instep, the swell of the stomach, show more knowledge of anatomy than is to be seen in any of the earlier statues in the Museum; while if it is compared, particularly in respect to the legs, with the sitting statue of Oimenepthah II., which is close beside it in the Museum, we shall see that, in the very next generation, art was declining and the sculptors were falling into bad taste.

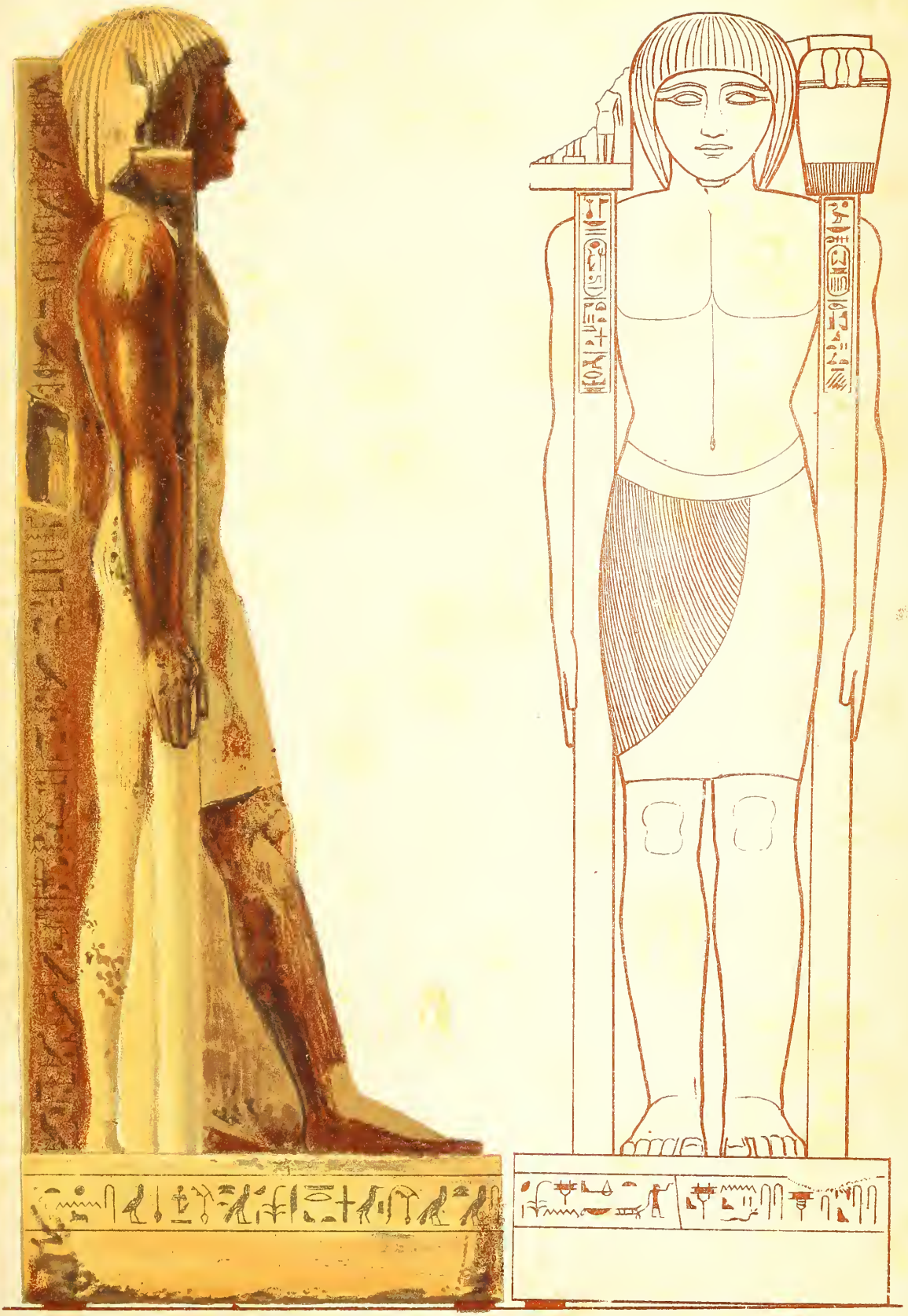
The name of the young prince is spelt with three characters. (See fig. 2.) The first is probably an anvil, in the form of two half-spheres, with the force of MES; the second is an owl, with the force of MO; and the third is a sceptre having an animal's head on the top, with an uncertain force, perhaps INE, a *hook*, as it is the crook usually held in the hand of the Egyptian gods and priests; it is still the camel-hook of the Arabs of Mount Sinai, and it seems to be the letter N in the names of the towns Mendes and Hermonthis. Hence the name of the young prince may perhaps be Mesmoine. But, as the first of these characters has had other and various forces given to it by various scholars, it may be as well to show why I think it had the force of MES. This can be done by showing that it will bear that force, and no other that we know of, in the chief places in which it is met with.

Fig. 2.

Thus, it is the first, and only disputed character, in the name of Meshophra Thothmosis (see fig. 3), which Manetho reads as Misaphris, and in that of his successor, which Manetho reads as Misphragmuthosis. Then it forms one out of a pair of titles which often precede a king's two names. (See fig. 4.) Champollion guessed that it might be a diadem, and translated the title "Lord of Diadems," because that title is met with in Hermapion's Greek translation from an obelisk. But the hieroglyphical character there meant is certainly an asp, of which we see a golden image tied

Fig. 3.

Fig. 4.



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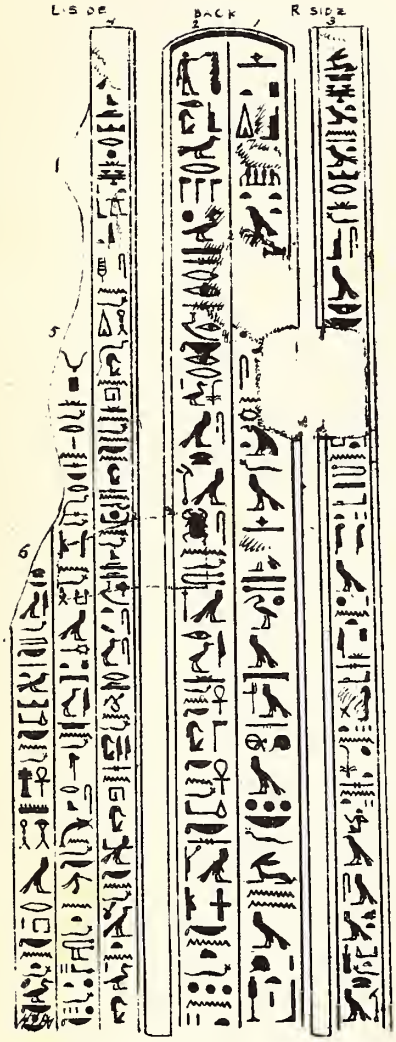
Scale of Feet.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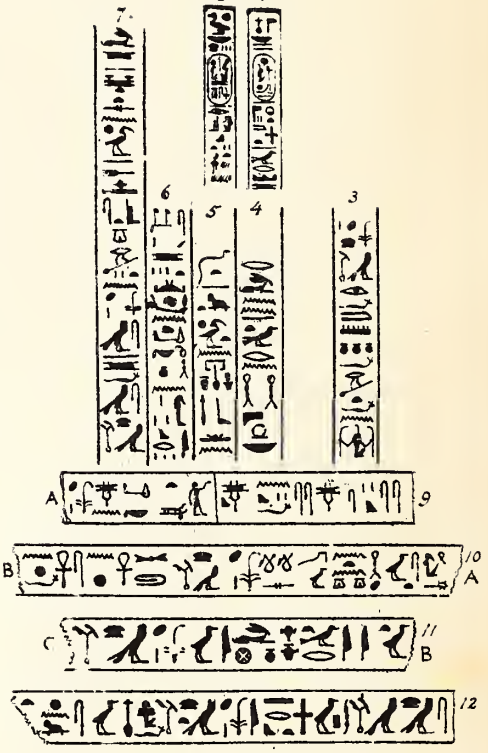
R SIDE



to almost every king's forehead. Moreover, in Hermapion's translation we meet with the following words: "King, lord of all the earth (whom the Sun approved), the king brave in war (whom Ammon loves and the All-shining has tried) for a king for ever." Now it will be observed that the words here placed within parentheses are translations of the two well-known names of Rameses II., and the titles which precede them can be nothing but the pair of titles above spoken of, which invariably accompany one another. The first title, "Lord of all the earth," is Neb-to, which we usually translate *Lord of the world;* and the second may fairly be understood as being Neb-misi, *Lord of battles.* Misi is the Coptic for *battle;* hence the sound for this character, which we obtain from the name of King Meshophra Thothmosis, agrees with that which we obtain by translating Hermapion's words into Coptic. Lastly, as to what our character represents. *Emes* is the Coptic for an *anvil.* Theophilus, in his *Diversarum Artium Schedula*, iii. 10, describes the Roman anvil as in the form of three half-apples. Our character is like two half-apples; and if we suppose that the anvil was, in the first instance, a simple block of solid iron, the heavy blows upon it would soon flatten the top and make it swell out on all sides into some such form as the above. Hence we see that the three arguments agree in giving to our character the force of MES. First, its place in Manetho's names, Misaphis and Misphragmuthosis; secondly, its forming part of the group which Hermapion translates "Brave in war," which may be represented in Coptic by Neb-misi, *Lord of battles;* and thirdly, by its resemblance to an ancient anvil, in Coptic, *Emes.*

This is a long discussion upon a single hieroglyphic, but it may interest the reader to see how the force and meaning of such characters are to be learned.

Hermapion's sentence above quoted contains the very words which we find written in hieroglyphics upon the two standards held by our young prince. On the standard in his right hand we read, "The priest, the lord of the world [king's first name], beloved by the various gods of Egypt." On the other standard we read, "The son of the Sun, lord of battles [Amunmai Rameses], beloved by Osiris, lord of the region of the dead." The two names here placed within the brackets may be translated by the words quoted above from Hermapion.

DESCRIPTION OF THE HIEROGLYPHICS.

No. 1.—The inscription on the right-hand standard. It may be translated, "The priest, lord of the world [first name], beloved by the various gods of Egypt."

No. 2.—The inscription on the left-hand standard, "The son of the Sun, Amunmai Rameses, beloved by Osiris, lord of Amenti;" or, of *the region of the dead.* These two are the only lines that I venture to translate throughout.

Nos. 3–7 are on the flat top of the base. The left foot stands between No. 3 and No. 4. No. 3 begins with the young man's name, "The royal son Mesmoine."

Nos. 9–12 are a continuous sentence round the four sides of the square base.

The supporting column has six lines of hieroglyphics. No. 1, on the back, begins "Dedicated to Osiris, Ro-t-amenti, or *ruler of the place of the dead.* From this title of the god the Greeks took their name Rhadamanthus, the judge of their infernal regions. On the same line, immediately following the break in the stone, is mention of the young man's mother, who is said to be deceased. In line No. 3, on the right side of the supporting column near the bottom, is mention of his sisters, called "The Royal Daughters." But of the greater part of the inscription I do not venture to give a translation, though many of the single words are well known.

SAMUEL SHARPE.

[An accomplished correspondent has favoured us with the following notes, which we have great pleasure in laying before our readers.]

The following are the chief facts known about the prince, Shaacmuab.* He was son of Rameses II. and the queen Hesit-Nefrit, the third wife of that monarch. Shaaemuab held the important office of *sem*, or chief of the priesthood of Ptah, at Memphis, and seems to have instituted some new forms in the worship of the Apis bull. Shaaemuab was the fourth of the 111 sons of Rameses II., and enjoyed great honour and dignity amongst his contemporaries. As early as the thirtieth year, at least, of his father's reign, he was appointed Governor of Memphis, and celebrated the festivals of the god, Ptah, or Vulcan, with great splendour. The discoveries of M. Mariette, at the Serapeum at Memphis, and of the immense subterranean galleries of the mummies of the Apis bulls, show that this prince, whose mummy was found in one of the sepulchral chambers, was buried with his gold and other ornaments in one of the tombs, in the fifty-fifth year of the reign of his father, whom he did not survive. His mummy was found mutilated; but at what time, and under what circumstances, did not appear, as the plunder of the tombs was as rife in the oldest days of the Egyptian monarchy as now. The inscription is extremely obscure, and consists of the fact of an address to Osiris on behalf of the deceased prince Shaaemuab, containing certain mythical allusions to the final judgment in the Hall of Truth and Justice, and other statements scattered throughout sepulchral prayers and adorations, comparing that prince to Horus, the son and avenger of Osiris. The same observations apply to the lateral inscriptions (left and right sides), which are also obscure and difficult to understand. The inscription round the plinth or pedestal on which the statue stands, A 9, 10; B 11, 12, is the text of a well-known chapter of the Ritual, the 54th of Lepsius, Todtenbuch, Taf. xxii. c. 54, where the rubrical heading entitles it, "The chapter of giving breath to a person in Karneter or Hades." There are two other chapters, (55, 56), on the same subject, with the texts similiar to the 54th; especially the 56th, which closely resembles the inscription of the plinth. The meaning of the chapter is as follows: "Oh Tum or Tomos, the setting Sun, give me the sweet breath of thy nostril. I am the great elder who

* It will be observed that our friends differ in their interpretation of the hieroglyphs denoting the name of the person represented.—ED.

dwells in Unnu. I have watched the egg of the great cackler or goose of the god Seb; I grow, it grows; I live, it lives; I breathe, it breathes." This same mystical form is found on a statue of Senmut, an officer of the court of Thothmes III., in the Berlin Museum, and is often repeated on sarcophagi and other objects, apparently in reference to the reanimation of the dead. The mystic meaning here hidden, unless it be an allusion to the mundane egg of the Orphic writers, is unknown.

[The learned curator of the Soane Museum, Mr. Joseph Bonomi, F.R.S.L., F.R.A.S., has kindly offered a few remarks of which we gladly avail ourselves.]

The front and profile views of the statue are not such as would be conveyed to the mind through the eye, but they are what architects call geometrical elevations drawn by actual measurement, so that the dimensions of any part may be known by application of the compasses to the scale.

The front elevation is in outline, for the greater facility of measurement, and the profile gives the precise colour of the stone, which is a conglomerate, in which flints and pebbles occur cemented together in nature's workshop by sand and rust of iron.

Notwithstanding this very adverse material, it has been fashioned into the figure of a man, and may be considered one of the best specimens of Egyptian sculpture in our national collection. In the general contour, the figure resembles very much the inhabitants of Lower Nubia; as does the colour of the material, particularly the head and arms, the complexion of the inhabitants of Thebes. For this purpose, and for its durability, it is supposed, this description of stone was chosen. The features are well defined, and the countenance has nothing of the African type,—a circumstance which goes far to corroborate the notion which has lately been entertained of the foreign origin of the family of Rameses. The arms are well formed, and the fasciculi of the deltoid, arising from the acromium scapulæ, better defined than in any other Egyptian statue in the Museum. The hands are rather small. The left leg is advanced in the attitude of marching, with which leg, it may be observed, it is to this day customary to make the first step. The knee of this limb is particularly well formed. The ancle is rather thick, and the foot heavy; the instep exceeds a little the height prescribed by the canon in use at the period, that is to say, one-nineteenth of the whole height of the figure.

It may be interesting to the reader to know how the inscriptions on the statue have been so faithfully given in the accompanying plate. The first operation was to obtain, by means of wet absorbent paper, an impression of each legend or line of hieroglyphs. This was afterwards faithfully copied by reduction according to scale; and this drawing, being handed over to the photographer, has been unerringly copied by the rays of the sun, and transferred to the stone.

HOLBEIN IN GERMANY.*

By H. Ward.

PART III. BASLE—*continued.*

"HANS HOLBEIN never travelled to Italy" (*nooit reisde H. Holbein naar Italie*), said his earliest biographer, the Dutchman Carel van Mander,† and his words have been repeated by others; but Dr. Woltmann declares that here again they have blundered. Let us appeal, says he, to far more trustworthy witnesses, the works of the artist, and these will speak plainly of a visit to Lombardy. This counter-assertion may be true; but Dr. Woltmann has hardly proved it. He does not point out any change in the artist's colouring; he only dwells on the increase of the old southern influence, in matters of feeling and composition, and in the modelling of the figures. He does, indeed, instance a few direct imitations; yet he allows that most of these were made from the engravings of Mantegna. The chief witness on his side is a *Last Supper*, derived from that of Leonardo da Vinci; and surely such a work as Leonardo's—the talk of the whole artist world—might well have travelled to Holbein in the shape of copies. The original itself seemed at one time destined to cross the Alps. Francis I. saw it when he entered Milan in 1515. He coveted the treasure, grudged it to the Dominican refectory, and ordered the whole upper wall to be packed off to Paris; but it was found that it would only come away in pieces. Disappointed of the painting, he tried to secure the painter; and Leonardo was at last tempted to migrate to the palace of St. Cloud, but only to die there in the king's arms, in 1519. Thus the great artist's career was limited to Italy; and she retained the crowning fruit of it; but the academy, which he had founded at Milan, must have had copies to spare for the northern admirers of the *Last Supper*, besides the one which we know to have been made for Francis I. The picture was completed just before Holbein was born; and he may have been familiar with the design from his childhood, for there were many channels through which it could have reached him. Not to speak of merchants and politicians, the Alps were then pretty

* *Holbein und seine Zeit:* von Dr. Alfred Woltmann. Erster Theil. Mit 31 Holzschnitten und einer Photo-Lithographie. Leipzig, 1866.

† Het Schilderboeek. Haarlem, 1604.

eonstantly erossed by German students, to and from the universities of Pisa or Bologna, and by men connected with the new art of printing. In Milan itself there were three or four German publishers between 1474 and 1520; and some of the draughtsmen, whom they employed for initial letters and title-pages, must have been quite capable of making a tolerable outline of the eomposition. Or, finally, Burgkmair may have brought a copy home to Augsburg, when he returned from Italy in 1508.

Dr. Waagen suggested, some years ago, that the early biographers may have been mistaken. It is not at all improbable. Our only quarrel with Dr. Woltmann is that he is so positive about the Italian trip, without showing the neeessity for it. Having traced his hero fairly enough to Lueerne, in 1518, or thereabouts, and having still a few months on hand, he pushes him across the lake, and over the pass of St. Gothard, and so by Bellinzona to Milan, and shows him Leonardo's masterpiece in all the freshness of its short-lived beauty. He doubts, moreover, whether he may not take him on to Pavia, in order to study arehitectural painting from the façade of the Carthusian eonvent there. But he is content with hinting the feasibility of this seheme, and he returns with him to Basle, where he regains his better judgment.

Holbein's *Last Supper*, painted on wood, was broken up, probably by the fanaties of Basle, in 1529. Some portions were lost; but the larger ones were preserved by Holbein's true friend, Bonifacius Amerbach. They are now pieced together, and form No. 21 of the Holbein Gallery in the Basle Museum. No. 5 is an earlier *Last Supper*, on linen, which we barely mentioned in our first artiele. The two works naturally ehallenge comparison; and No. 5, in spite of its youthful defeets, has been the more tenderly treated of the two. The personages, say the critics, are here more clearly, though coarsely individualized. Judas receiving the sop, is abject and self-condemned, yet unrepentant; whilst St. Peter is glaring at him, with both fists doubled upon the table. In the later work (No. 21) all the caricature is reserved for Judas. He sits on the speetator's side of the table, griping the money-bag, and displaying a harsh profile of the lowest Jewish type. Lavater * has chosen this to illustrate his ideas of sordidness. Mrs. Jameson eomplains that Judas is made a foul protagonist in the scene. Only eight of the other Apostles are preserved: otherwise, perhaps, he might not appear so prominent. In Leonardo's pieture he is shrinking back; a more refined conеeption of the wreteh, whose "little grain of eonscienee" drove him mad. Holbein has only thought of the kissing traitor, with his hard mouth screwed to desperation. Christ has just spoken the words, "One of you shall betray me," and his face and the action of his hands are manifestly after Leonardo; and so is his half-isolation on his right hand. The isolation is here effected by St. John's turning aside to repeat the words to St. Peter, who has risen, and is bending his noble head, with his hand upon St. John's shoulder. The pieture is altogether a fine one, though very inferior to that of Leonardo.

Of all the works preserved in the Basle Museum, the best, aeeording to the portrait-painter Sandrart,* is one designed apparently for an altar-piece, and divided into eight seenes of the *Passion*. Sandrart's *vivâ voce* aecount of it, in 1644, so moved the Eleetor of Bavaria, that he offered to buy it at any priee; but the Council of Basle refused to discuss the bargain. Dr. Waagen eompares this work with the *Basilica of St. Paul*, by the elder Holbein, and he deseries a elose resemblanee between them, both in the execution of the parts and in their tabular arrangement. He says that one ean nowhere more distinctly traee how young Holbein's style was developed out of that of his father. He is probably quite eorrect when he pronounces it to be a youthful work, arguing from the inequality of the eomposition, six of the scenes being either overcrowded or caricatured, whilst the other two are almost perfect. But he is just as probably mistaken when he deteets the father's influenee in the choice of eolours, and in the manner of laying them on; for they have not only suffered from chemical ehanges, but also—as recently discovered doeuments prove—from restoration. Thus the arguments must be ehiefly based upon the character of the designs. Dr. Woltmann eonsiders that this, though one of the earlier, is not one of the earliest works of Holbein. Some of the eompartments are very striking, as one may see from Merian's exeellent lithographs. The *Arrest*, *Christ before Caiaphas*, and the *Crucifixion*, may be overcrowded, but eaeh has a fine scenie effect. The composition of the *Entombment* is taken from that in the Borghese Palace at Rome, painted by Raphael for Perugia, in 1507. Raphael himself was partially indebted to one of Mantegna's engravings, of which he made a copy before forming his own design. But the resemblance is too elose to be merely due to a common souree. Holbein must have seen a eopy of Raphael's pieture. The dead body has been foreshortened, in order to suit the narrow compartment; but the mode in which it is borne on the shroud, with dependent arms and legs, is borrowed from Raphael; and so are the bearers, even to some details of costume. The Christ of Raphael is divine in death; that of Holbein is more distorted by suffering. Holbein's figures of the Virgin and St. John, standing apart, are comparatively insignifieant; but the prineipal design is noble, and adapted in the spirit of a great master.

Still more noble, and far more original, we believe, is the *Agony in the Garden*. The story could not be better told. The three Apostles are sleeping in the foreground; St. Peter supporting his head with one hand, and having let a short sheathed sword slip out of the other. Round a

* "Essays on Physiognomy," vol. i., p. 186. London, 1789.

* Author of *Teutsche Akademie* in 1679.

rock in the background approaches the guard led by Judas, but not near enough to disturb the feeling of the scene. Christ is the very image of agony and prayer. The bones of his clasped hands start out, his kneeling form is bent with earnestness, and his eyes are fixed upon the sign of the cross in the heavens above him.

There is one point here worth observing, before we proceed further. The usual symbol of the agony is the cup. This was suited to the dark ages, when the scriptural figures of speech were slavishly rendered by the artist. Some of our readers will scarcely believe that the Holy Ghost, on the day of Pentecost, used to be depicted as a dove with literal tongues of fire—such tongues as the poor artist could devise; namely, so many red lines extending from the open mouth of the dove to the heads of the disciples. In those days the cup was a recognized symbol; and it was suspended in the air, without any regard to the laws of gravity. But when the later painters adopted it, they altered its significance by placing it in the hands of the angel. This converted it from a cup of bitterness into a cup of consolation. In such a shape the two ideas are quite irreconcilable; whereas the cross conveys them both, in accordance with all the traditions and sentiments of Christianity. Holbein may have followed some previous example of the Agony; but the fact remains, that he showed a finer taste than most painters, whether of Italy or elsewhere, when he made the angel floating high above Christ, and holding a cross, as a symbol both of the death to be undergone and the triumph to be achieved.

Such is Holbein's great series of the Passion. We can hardly agree with Dr. Woltmann in preferring another series, which consists of ten pen-and-ink drawings, shaded with Indian ink. They are more mature, more equally sustained, and possibly more original; though here again the biographer has to mention the name of Mantegna. Being little more than outlines, they cannot of course rival the painted series in point of effect; and we should say that they are also inferior in passionate expression. They are masterly designs for glass-painting or for tapestry; but their pictorial beauty is decidedly marred by their heavy frameworks of Renaissance columns and arches, especially in two instances where medallions are tastelessly introduced. We need not describe them, nor recommend Mechel's engravings to the reader. He has only to enter the British Museum, and turn into the King's library, and on one of the screens he will see repetitions of seven of them, all from the hand of Holbein himself.

Hitherto we have met with no very cogent argument why Holbein should have necessarily studied Leonardo at Milan. The same arguments would carry him on to Perugia to study Raphael; and if he reached Perugia, he would not have omitted visiting Florence; a fact that could hardly have escaped the notice of his early biographers. His treatment of other sacred subjects is very Italian, as might be expected: the more marked coincidences may sometimes be purely accidental. Thus, a *Nativity* is lighted by a glory proceeding from the body of the child. Correggio has a painting with a similar effect; but, as Dr. Woltmann remarks, Correggio's *Nativity* is six years later than Holbein's. The idea may have been suggested to both painters by some old illumination, or both may have taken it immediately from a certain passage in one of the apocryphal gospels. We will now conclude the subject with noticing a figure, the modelling of which the German critics derive directly from Leonardo. It is one of the many matters that can not be absolutely settled; but we are still waiting with curiosity for the opinion of Mr. Wornum.

The great physiognomist Lavater has declaimed against the figure in question with rotund pomposity. He declares that Holbein, in painting such a repulsive abomination, has "discarded all taste, forsworn all love, and disowned all humanity." Dr. Waagen retorts by saying that Lavater is a mere "Æsthetiker," unable to raise himself above the prejudices of sentimentalism. Now, Lavater is too solemn, no doubt; still he is not quite wrong. Holbein's *Dead Christ* must be something to be shuddered at. The picture is life-size, and said to be wonderfully real. Holbein was essentially a realist; but his extraordinary strength of mind and his native instinct for beauty generally kept him above vulgarity and apart from all that is horrible. It was impossible that he should paint a sickening work of butchery, such as the old German miniaturists made out of the scourging of Christ. But we think that, for once, he has been untrue to the feelings of high art. Even in Mechel's engraving, the *Dead Christ* is almost too painful. It is the corpse of a man who has died a violent death—every muscle made convulsively distinct, the toes cramped, and the fingers distorted—lying alone and almost naked, as if he were uncared for, under a low vaulting. There is nothing about him to remind one of our Saviour, except the marks of the spear and the nails. It is evident that he is stretched upon a surgeon's table, though Holbein has placed a little drapery upon the board. In fact, he had made such an admirable study, that he was seduced into making a finished picture of it, and adding the inscription, "*Jesus* Nazarenus Rex Jud. H. H. 1521."

We admit that we have been very serious this month; but our next and concluding article will be much more chatty, and deal with the personal character of the artist and his friends at Basle. We shall only have to give a detailed notice of one painting; but that one is the Madonna, painted for burgomaster Meyer, which is said to be suggested to every German by the mention of the name of Holbein.

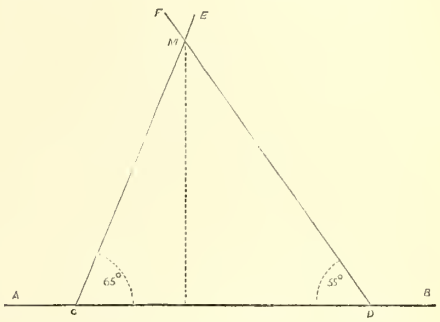
THE METEORIC SHOWER OF NOVEMBER, 1866.

By J. Carpenter, of the Royal Observatory, Greenwich.

WE should do Nature poor justice if we were to consecrate all our lays and devote all our attentions to those of her works and wonders that are comprised within the area bounded by the surface of the little globe we inhabit, to the exclusion of those grander creations and more sublime phenomena that are to be witnessed in the boundless space above and around us. A fitting opportunity for breaking new ground is offered by the beautiful and seemingly marvellous display of celestial pyrotechny which attracted so large a share of public attention on the night of the 13th of November last; and we take advantage of the occasion to mingle in our columns the researches of the naturalist with the observations and inductions of the philosopher.

It may be thought that the numerous accounts of and comments upon this meteoric shower which appeared in the daily newspapers at the time have exhausted the subject, and that hence there is no more to be said concerning it. But a newspaper communication is an ephemeral production—read one instant and forgotten the next; and, moreover, much as has been said in this form concerning meteors, a great deal has been left unsaid; and we have, therefore, no fear of not finding "ample room and verge enough" for the few remarks it is our pleasure now to lay before the reader.

Our talk is to be of meteors. What, then, is a meteor? In popular parlance, it is known as a "shooting" or "falling" star, and in very many minds an impression prevails that when these bodies are seen to dart across the sky, some of the fixed stars have really "shot from their spheres;" we have more than once been asked by innocent querists why the stars are called *fixed*, when every now and then they are seen to fall? It is, therefore, necessary to inform all who have a notion of this sort in their minds, that there is no connection whatever between shooting stars and the fixed stars of the firmament, and that there is nothing whatever in common between them. The fixed stars are stupendous suns like ours, possibly the centres of planetary systems, billions of miles distant from us; while shooting stars are tiny little bodies, varying from a few grains to a few pounds in weight, and, comparatively speaking, only a few miles above the earth's surface. Do you wonder how their height is measured? We will endeavour to show you. Those who have brought a little trigonometry away from school with them will not require to be told that the angular altitude of a meteor, observed at two distant stations, is all that is required for the purpose of determining its height. The principle of the means by which this is effected may, however, be made intelligible without much geometry. Suppose one observer at London and another at Brighton simultaneously observe a particular meteor. Suppose the observer at London estimates its angular altitude at 65 degrees above the horizon, while the one at Brighton estimates that altitude at 55 degrees. Now, if upon a base line, A B, we



measure off a part, C D, upon any convenient scale (say an inch to 10 miles), which shall represent the distance between London and Brighton; and if we draw a line, C E, inclined to the base line at an angle of 65 degrees, and another line, D F, inclined to the base line at an angle of 55 degrees, they will meet or intersect at a point, M. Then, if we drop a perpendicular from M to the base line, the length of this line will represent the height of the meteor, upon the same scale as that which we chose for our base line. By means analogous to this the heights of a large number of meteors have been at various times determined, and it has been found, within very small limits of error, that the average height of meteors at the middle of their flight is 62 miles; their height at commencement being about 10 miles greater and at disappearance about 10 miles less than this.

Falling stars, then, have nothing to do with the members proper of the starry firmament. This fact, by showing what they are not, helps in a very small degree to a knowledge of what they are. Of course, a lot of theories, more or less fanciful, have been proposed to account for them. They have been supposed, since they are known to make their appearance within our atmosphere, to be the result of some sort of gaseous exhalations to which that atmosphere gives birth; they have been held to be of electrical nature, something like electric sparks; they have been thought to be darted to the earth from the sun; and for a long time they were held to be small fragments of matter ejected from the volcanoes of the moon. But each and all of these hypotheses involved conditions that the meteors do not fulfil; and hence, one by one, they have been abandoned. The generally received theory of the present day, and it is one which is satisfied by all the phenomena which these bodies present, is that they are small masses of cosmical matter circulating

about the sun—tiny little planets, in fact,—and coming at times within the earth's atmosphere; sometimes falling to the earth in the form of those mysterious, half metallic, half stony little masses that we call aërolites.

But if they be mere lumps of metal and stone, why do they shine out with such star-like brilliancy? Are they always in a burning state, or do they take fire only when they come within our atmosphere? The latter is undoubtedly the case; the earth's atmosphere is the cause of their inflammation. It would seem at first sight probable that this combustion had a chemical origin; that the meteors were composed of some highly inflammable matter which is ignited by combination with the chemical components of the atmosphere. An idea of this kind prevailed some years ago, but it is no longer necessary to resort to such a supposition; for the ignition of the scraps of meteoric matter is amply accounted for by the mechanical theory of heat, according to which that ignition is a consequence of the immense resistance the bodies meet with in our atmosphere, and hence of the enormous friction and consequent heat produced thereby. Upon this point we cannot do better than quote the words of Dr. Joule, one of the famous exponents of this beautiful theory of mechanical heat. Our extract is from a lecture delivered at Manchester some twenty years ago, when this theory was first dawning upon philosophical minds:—

"From the velocity with which shooting stars travel, there can be little doubt that they are small planets which, in the course of their revolution round the sun, are attracted and drawn to the earth. Reflect for a moment on the consequences which would ensue if a hard meteoric stone were to strike the room in which we are assembled with a velocity sixty times as great as that of a cannon ball. The dire effects of such a collision are effectually prevented by the atmosphere which surrounds our globe, by which the velocity of the meteoric stone is checked, and its living force converted into heat, which at last becomes so intense as to melt the body and dissipate it in fragments too small, probably, to be noticed in their fall to the ground. Hence it is that although multitudes of shooting stars appear every night, few meteoric stones have been found, those few corroborating the truth of our hypothesis by the marks of intense heat which they bear on their surfaces."

It seems anomalous that so soft and subtle a bed of matter as the air presents, especially in those exalted regions, should offer such a powerful resistance as to strike fire from a body coming into collision with it; but the anomaly vanishes when we bear in mind that this resistance is proportionate to the velocity of the body's flight, and that this velocity, in the case of meteors, is upon the average about thirty miles in a second of time—a speed almost beyond human conception. Suppose, for example, that a meteoric stone six inches in diameter dashes into our atmosphere with a velocity of only eighteen miles in a second; and suppose the atmosphere at fifty miles high to be 100 times less dense than at the earth's surface. The resistance offered would be equal to a pressure of at least 52,000 pounds; and if the stone travelled twenty miles with this resistance before it, sufficient heat would be developed to raise seven millions of pounds of water one degree of temperature. The greater part of this intense heat is communicated to the displaced air, and hence the stone may be said to be in a sort of hot blast furnace. If only the one-hundredth part of the developed heat be received by the stone, it would still be more than amply sufficient to fuse and dissipate any materials of which it may be composed.

We have here an example of one of those beautiful "provisions of nature" with which the universe is filled. "Were it not"—we are again quoting Dr. Joule—"for the atmosphere which covers us with a shield, impenetrable in proportion to the violence it is called upon to resist, we should be continually exposed to a bombardment of the most fatal and irresistible character. To say nothing of the larger stones, no ordinary buildings could afford shelter from very small particles striking at the velocity of eighteen miles per second. Even dust flying at such a velocity would kill any animal exposed to it."

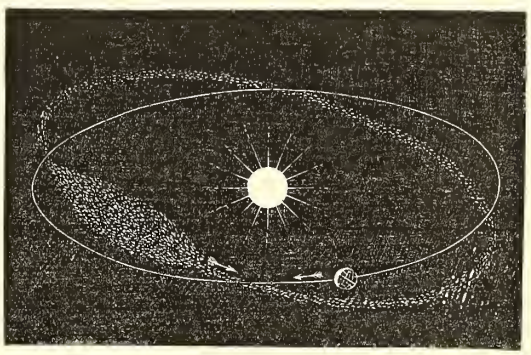
Question begets question when we cross-examine inexhaustible nature; and we are prompted to inquire what is the nature and composition of these celestial fireworks? By analysis of their light, by means of the prism, we find that the burning matter is sometimes of a metallic and sometimes of an earthy or stony nature, and this in a measure identifies them with the stony-metallic masses that we know to have fallen from the skies. It is pretty well established that there is a close connection between meteors and aërolites; the one class of bodies merging imperceptibly into the other; and, therefore, in analysing the aërolite we may reckon upon gaining at least a probable knowledge of the constitution of the meteor. Chemists and mineralogists have frequently and with great care analysed aërolites and meteorites, and they have found that their composition is nearly always the same. Their structure, microscopically examined, shows them to be composed of minute globules, which suggest the idea of an originally vaporous condition; and their component matter is identical with that of earthly rocks and minerals. Sulphur and carbon, silica and alumina, iron—metallic and magnetic,—with other metals, such as nickel, cobalt, manganese, tin and copper, have been recognised among the materials of which they are formed; but—a fact striking and significant—no new material, no substance unknown upon the earth has ever yet been detected among the elements of their composition. Such a fact points to a unity of composition in some at least of the members of our planetary system, and favours the supposition of a common origin to all that family of bodies of which the sun is the grand centre and chief.

We will pass now to the consideration of those periodic displays of meteors, that, from the abundance in which these bodies manifest themselves on

such occasions, have received the name of "Star Showers," and one of which we have so lately, and under such favourable circumstances, had the good fortune to witness. It is well known that there are certain nights in every year that are remarkable for the regular recurrence of large numbers of shooting stars; perhaps the most famous date being the 10th of August, when, according to the Irish legend, Saint Lawrence sheds his fiery tears. The next important date is comprised between the 11th and 14th of November; and it is with the shower of this period that we are specially concerned. A cursory examination of the long lists of meteor records that have been collected from the histories of past times and of all countries, does not fail to show that, whereas a display more or less important takes place *every year* between the above dates, there are yet *certain years* when, according to these ancient records, the display reaches an extraordinary magnitude and the meteors appear in stupendous numbers. One of these occurred in the year 902, when the Aghlabite King, Ibrâhim bin Ahmad, died, and "the stars scattered themselves like rain to the right and to the left." Another is recorded in the year 934; another in 1002; and another in 1202. The chronicles of the Kings of Portugal make mention of another in 1366, which so terrified the people of that country that they thought the end of the world had come. The all-recording Chinese tell of others in the years 1533 and 1602. In 1799 occurred the brilliant shower witnessed by Humboldt and Bonpland at Cumana in South America, and so well described by the former in his *Relation Historique*. The year 1832 is also marked by a shower which pioneered the splendid one of the following year: this latter is the last great meteoric display preceding that which we have so lately observed.

Now it became evident, upon close examination of those and other such-like accounts, that grand November displays take place three times in a century, or at intervals of about 33 years apart; and the last having happened in 1833, it was reasonable to expect a return in 1866; but inasmuch as each of the former great showers appear to have been anticipated by a slighter one in the year preceding, observers anxiously watched the night of the 13th of November, 1865, for this precursor, and were rewarded by a sight which, although far below that of 1866, was still extraordinary; about a thousand meteors being counted between midnight and five o'clock the following morning.

This may be a proper place to put and answer the questions, why these showers occur on particular days of the year? and why such an extensive display should take place every 33rd November? It is assumed, and there are very good reasons for admitting the correctness of the assumption, that there are a number of concentric rings of these meteoric bodies circulating about the sun; orbits, in fact, every part of which is thronged with meteoric particles. The earth, in its annual course about the sun, cuts through these rings on certain days of the year, that is in certain points of her orbit, and this explains the annual recurrence of showers on certain days. The majority of the rings, of which there must be a goodly number, have the meteoric particles distributed evenly throughout their circuit; but the November ring—the ring we cut through every November—is not of such equable density; for its component particles and masses are very thickly clustered in one part, and scantily dispersed over the remainder. This November ring has been made the subject of a great deal of research; and what astronomers call its "elements," or its dimensions, position, &c., have been determined with considerable accuracy. In size, it has been found to be slightly less than the orbit of the earth; revolving about the sun in a period of 354 days, or 11 days less than the earth's period. The direction of its motion is opposite to that of the earth, and the orbit is inclined to the earth's orbit by an angle of about 17 degrees. The portion of the ring which constitutes the thick cloud of bodies, is about one-fifteenth of its circumference, or in linear measure about 40 millions of miles, while the breadth of the cloud is about 100,000 miles. The disposition of things and the course of matters which produce the periodic grand displays, may be made intelligible be the following diagram.



In this diagram the continuous circle represents the orbit of the earth, and the dotted ring the zone of meteoric bodies, with the cloud of them collected at one part of it. The earth is going one way (indicated by an arrow) and the ring of meteors another (indicated by an opposite arrow); and the orbit of the meteors is inclined to that of the earth. Now, it will be plain that if the ring moved at exactly the same speed as the earth, we, the earth, should meet it at the same point of its circuit every year; but as it moves faster than the earth, it is equally plain that the part which we cut through in one November has gone by 11 days before we come to the point of intersection in the next November, and hence we perceive that we cut the ring every year in a new place. In the course of years we naturally fall in with the thick part of it, and then it is that we get the great meteor showers; this encounter taking place every 33 years. The reason why we have showers on two or three years at the end of every 33-year

cycle, is because the cloud or group of particles is so large, that after we have pierced it in one place one year, it has not got completely out of our course by the next year, and so we meet it again and pierce it in another place: it does not get out of our way in the eleven days' grace we give it.

We, then, dash into the midst of this crowd at the rate of 18 miles a second, and its members fly on all sides around us with a flight of the same speed. The reader will now be prepared to understand why all the meteors in any particular shower seem to stream from one point of the heavens—the "radiant point," as it is termed. It is because this point is the part of space towards which the earth in its orbital course is moving; and the meteors appear to come from it, just as, if we were walking through an avenue of trees, the individual trees would appear to be coming from the end of the avenue; or as, if we were running through a crowd, all the people composing it would seem to be coming *from* the direction of the spot *to* which we were going. The "earth's way," as the direction of the earth's motion is termed, at the time of the November displays is in a line with a star in the constellation *Leo*, and hence all the meteors on these occasions seem to radiate from that star.

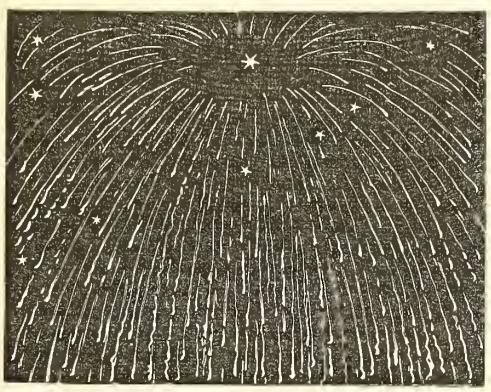
It is time we said a few words upon the particular shower which has called forth this article; but there is little to be added to what we have already written, save in the way of mere description. Those who had the good fortune to observe the shower will not want a detailed account of the appearance the meteors presented; and as those who did not witness it can gain a far better notion of their appearance from an illustration than from any word picture we can paint, we have prepared a chromo-lithograph in which we have depicted, as truthfully as possible, the aspect of a region of the sky—the north-west—at an instant when the meteors were at the thickest of their flight, which was at about a quarter-past one in the morning of the 14th. A more "sensational" picture might have been produced by the insertion of a larger number of meteors; but this would have entailed a sacrifice of truthfulness, for not more meteors than we have shown were at any one instant visible in any area of the sky equal to that included in our illustration, although quite as many as we have included actually were seen. Of course it is impossible to reproduce by any art-process the glowing brilliancy of a luminous body, like the bright nucleus of a meteor; the soft radiance of the trains of the meteors, also, shining with their greenish-blue light, can scarcely be adequately represented in a drawing.

It was a rare coincidence that in the cloudy month of November, a clear night should happen on the occasion of an event that occurs once only in 33 years. The previous night was hopelessly cloudy; had the shower occurred then, as was partly anticipated, it would have passed unseen—in England, at all events. The morning of the 13th also gave little hopes; it was only as the afternoon wore on that the clouds broke up and dispersed, and the chances of seeing the display bore a favourable aspect. The evening, with a few exceptional intervals of cloud, was superbly clear; but during the early hours, there was little to indicate the advent of the spectacle that the later hours were to bring with them. From nine to eleven o'clock only 25 meteors were noted: not more than would be seen on any ordinary November night. But when, at about the latter hour, the constellation *Leo*, the throne of the radiant point, came above the horizon, it was evident that a celestial sight of no ordinary character was to be expected. First, at the rate of about one a minute, afterwards at the rate of four or five, the fiery shafts silently flew forth in all directions from their common point of departure; now horizontally and straight as Euclid's line, now vertically upwards like an earthly rocket, now downwards in a graceful circular curve. Thus, between eleven and twelve o'clock, 168 meteors appeared; but it was not until after midnight that the display commenced in earnest. The average number of meteors per minute up to that time did not exceed three; but by half-past twelve this average rose to 70, or more than one a second. Then there was a lull for a few minutes, and after that, the numbers steadily increased, till the average stood at 118. Then clouds came on and threatened to put an end to the scene; but they cleared off after a few minutes, and at about a quarter-past one the maximum of the shower was reached: the average at that time being 122 meteors per minute.* Whether a greater average occurred during the slight interval of cloud, it is of course impossible to say. From this time the numbers rapidly declined, till, after a few short spurts of greater numbers, the average fell to 70 per minute at half-past one, 50 per minute at a quarter to two, and 20 per minute at two o'clock. At half-past two again a slight spurt increased the average for a minute or two, and at three o'clock it stood at 10. Still it decreased until between four and five a.m., when only 40 meteors in all were counted.

The whole number registered at Greenwich throughout the entire display, amounted to 8,485. Allowing for the cloudy moments, we may say that the total number of meteors passing over the sky of Greenwich, from nine p.m. on the 13th to five a.m. on the 14th, was about 10,000. Now from this it is evident that, grand as was the phenomenon, it must have been very far short of the sublimity of previous showers. Admitting the possibility of exaggeration in some of the ancient accounts, such as that of the shower of 1366, in which we are told "that the sky and air seemed to be in flames, and even the earth appeared as if

* The numbers we give are those determined at the Royal Observatory, Greenwich, where every care was taken by an organised system of observation, in which nearly a dozen observers were employed, to secure as accurate a record as possible of the various phases of the shower, and of all data it might afford. The hours we have cited refer to Greenwich mean time.

ready to take fire," we cannot admit exaggeration in such an account as that of Humboldt, of the shower of 1799, in which it is stated, amongst other illustrations, that, "from the beginning of the phenomenon there was not a space in the firmament equal in extent to three diameters of the moon, that was not filled at every instant with falling stars." Again in the year 1833, the meteors were compared in numbers to snow-flakes in a snow-storm at the thickest part of the shower; and when their numbers had considerably diminished, it was reckoned that 34,000 passed over the sky in the course of an hour. One observer gave a sketch of the appearance of them, of which sketch the accompanying cut is a copy.



Whether the comparative poorness of *our* shower is to be attributed to the thickness of our atmosphere, shutting out of view the fainter meteors; or whether we did not pass through the thickest part of the meteor cloud while the radiant point was above our horizon, we cannot say. It has been suggested by one authority on this subject, M. Coulvier Gravier, that we may expect the real maximum of the 33-year epoch in the November of the year we are just entering, 1867. Perhaps the reader will deem it worth while to "make a note of" this in his or her diary.

The meteors themselves were not so imposing in magnitude as some that have shown themselves on former occasions. The greater number of them were about equal to stars of the first and second magnitude; comparatively few of them attaining a brilliancy equal to that of the brighter planets Venus and Jupiter. Their colours varied slightly; the majority were of a yellowish-white, while some bore a bluish and others a reddish tinge. The most beautiful of their features were, as usual, the luminous trains or streaks that marked their path through the air. Some of these trains extended to 90 degrees in length, and a few of them remained visible for several seconds after the extinction of the nucleus: they were mostly of a greenish colour, and, in one or two cases, after they had disappeared a smoky trail remained behind for several minutes and then gradually dissipated. These trains have been thought to be mere ocular deceptions, arising from the retention of the image of the meteor on the retina of the eye, upon the same principle as a lighted stick quickly waved before the eye gives us the impression of a continuous line of light; but this idea is now given up, and it is generally assumed that the train is composed of tiny particles of the dissipating meteor left behind in its rapid course through the air. Even this explanation is, however, open to a little doubt.

But we have passed our allotted limits of length, so we must bring our gossip to a close. If Mons. Coulvier Gravier's supposition mentioned above be correct, we may have a better shower to talk about next November; if this does not "come off," we may rest assured that we have seen the last meteoric display that is likely to occur for the next 33 years. The year 1899 will witness the recurrence of the event, and, as this is the season of good wishes, we cannot do better than wish every one who has perused these columns health to see it.

ART NOTES FROM PARIS.

By G. W. Yapp.

THE artists of France have just performed an important electoral duty, namely, the choosing of two-thirds of the Admission Jurors for the Fine Art department of the Exhibition of 1867. The original arrangement was, that one-third should be elected by the Academy of the Beaux-Arts, one-third by those artists who had received a first-class medal or its equivalent, and the remaining third by the Imperial Commission; but the Academy has not yet forgiven the Government for taking from it the management of the School of Art and the annual Exhibitions, and positively declined to have anything to do with the matter—the Academy would be Cæsar or nothing!

This being the case, the Commission turned over the Academy third to the general body of decorated artists and medalists, and the result is such, that no one can have any just reason to complain. It must be premised that each artist voted only for the Jurors in that department in which he had gained his own honours, the painters in that of painting only, the sculptors in that of sculpture, and so on. The number qualified to vote was about four hundred, and those who did not find it convenient to attend personally were allowed to send sealed voting-papers under cover, with their names, to the superintendent of the Beaux-Arts, who is at the head of that department of the Exhibition. The number of votes recorded were, of painters 147, sculptors 70, architects 33, and engravers 25; in all 275, which, making due allowance for absentees, cannot be considered a small proportion. The number of Jurors to be elected, two-thirds of the whole, were, in painting 16, in sculpture 10, in architecture, in engraving, and in lithography, 6 each. The following names of the painters elected by their peers will show how this experiment in self-election has succeeded:—Baudry, Bida, Breton, Brion, Cabanel, Couture, Français, Fromentin, Gérôme, Gleyre, Hébert, Ingres, Jalabert, Meissonier, Pils, and Th. Rousseau. This list includes several members of the Academy, all the professors in painting of the École des

Beaux-Arts, representatives of the Old School as well as of the New, and artists in all styles, history, genre, and landscape, classic as well as picturesque. The other lists are as strong in good names, or nearly so, as that of the painter Jurors. The Government nominees are principally officials connected with arts, connoisseurs and literary men, amongst whom are the Marquis Maison, M. P. de St. Victor, M. Ad. de Beaumont, Vicomte H. Delaborde, M. Charles Blanc, M. de Longpérier, M. Théophile Gautier, and M. Soulié, keeper of the gallery of Versailles.

The Imperial Commission has revised its regulations concerning the admission of works of art in the most liberal spirit; instead of requiring works to be sent in during the month of October last, artists are to make application in writing, giving title and description of their works, which, when known to the juries, will be admitted or rejected without previous displacement, the decisions to be made by the end of the present year. Those works admitted on written application will not have to be sent in till the 25th February, and those which the juries desire to examine previously, by the 20th January. The artists are well pleased, as they should be, with these arrangements; the only subject of complaint is the comparatively small amount of space for the art productions of France during the last eleven years. The space is certainly not too large, and the sifting must be severe, but even the *Champ de Mars* will not accommodate the whole world of art.

It must be explained that the juries mentioned above are only for admission of works, not to award the prizes; the appointment of the prize juries has been deferred by decree until the others have finished their duties.

Those who are not accustomed to large galleries will be surprised perhaps to hear that the famous Louvre does not contain more than two thousand pictures; of these 560 belong to the Italian, 620 to the German and other Northern Schools, 700 to the French, and 25 to the Spanish School. Amongst the works of the Great Masters are 12 by Raphael, 3 only by Correggio, 18 by Titian, 13 by Paul Veronese, 9 by Leonardo da Vinci, 8 by Perugino, 22 by Rubens, as many by Vandyk, 17 by Rembrandt, 40 by Poussin, 16 by Claude, and 11 by Murillo.

The Raphaels will presently be increased by the appearance of a picture which has gone through strange vicissitudes: the work represents *John the Baptist* as a boy, seated on the trunk of a tree, with the right arm raised, and the legs apart. The picture has been much injured and retouched, but the face is said to be intact, and such as no one but Raphael could paint, the drawing and expression full of force and elegance, and the landscape superb. It was engraved by Valée, and is also to be found in Landon's work, No. 324. Passavant says that it was given by Louis XVIII. to a village church, but being injured by dampness it was returned to the Duc de Maillé, who had placed it there by the king's orders; after the death of the duke his heirs found it in a loft, and knowing nothing about it, let it go with a lot of lumber, and it was sold for fifty-nine francs to a picture-dealer, who soon discovering the pearl he had picked up, had it repaired, and offered it to the Government for 60,000 francs; it was, however, claimed as belonging to the State, the dealer only receiving a sum equal to the price he had paid for the work, and what he had expended upon it, and restored to the Louvre—where it has actually been lost for nearly forty years. Such is the account of the recovered Raphael, and it is curious enough to be true.

The Louvre has made another acquisition: an English picture presented by a French amateur, M. Callon, and signed G. Ferguson, 1610; the first, it is said, of our School in the gallery, though we think we remember seeing one, if not more, by Bonnington, but perhaps he is classed as a naturalized French artist. The subject of the picture in question is *Dead Poultry and Game*; we could have wished something a little more classical, and yet where could the Louvre have obtained a Reynolds or a Gainsborough? Little could G. Ferguson have dreamed of the honour that awaited him and his fowls, two centuries and a half after the latter had been made objects of art.

The great vase from Amathus, supposed to be the only remaining relic of the famous temple dedicated to Venus, has been placed in the gallery of Egyptian and Ninivite antiquities; it is an immense amphora, about six feet high and ten feet in diameter, hewn out of a block of coarse-grained stone, and bears strong marks of antiquity; the form, though imperfect, is not ungraceful, and there are traces of ornament about the handles. As an object of art it certainly is not remarkable, but it is very old and probably unique, and likely to remain so.

The Louvre is busy preparing for the Exhibition year; the galleries of ancient sculpture have been closed for a considerable time; the frescoes in four of the rooms, executed by Romanelli in 1660, are being restored by M. Balzo, and a fifth is being decorated by M. Matout and M. Biennoury. A fine and highly decorated room in the new Louvre is being prepared for the larger works of the old French masters, Lebrun, Poussin, Lesueur, and others; and the grand staircase, which will eventually form a principal way to the galleries, is being constructed, but it is doubtful if this work will be completed for the coming year. The reconstruction of the further end of the great picture gallery, and of the rest of the river front which connects the Louvre with the Tuileries, is proceeding with extraordinary rapidity; in the latter portion will be the new *Salle des Etats*, in which the Sovereign meets the members of the two legislative bodies at the opening of each session; and when this is finished the present *salle* in the new Louvre will be devoted to pictures. The *Pavillon de Flore*, the corner of the Tuileries on the river side, is nearly finished, as regards the exterior, and both this and the two faces of the new gallery adjoining are profusely decorated with sculpture.

The sculptural work of the façade of the new Opera house is just commenced, and this and other parts of the building will give employment to an immense number of artists, including some of the most eminent in France. Besides the grand composition of the entablature, the principal façade will be decorated with medallions of Cimarosa, Pergolese, Bach, and Haydn; seven busts in bronze gilt are to be placed in bull's-eyes, Mozart occupying the central place with Beethoven, Auber, and Rossini to the right, and Spontini Meyerbeer, and Halévy to the left; and on the return of the façade, busts of the librettists Quinault and Scribe. The lateral façades are to receive twenty-four busts of composers, commencing on the one hand with Monteverde and ending with Verdi, and on the other beginning with Cambert and closing with Adam. In the principal vestibule, Italian, French, German, and English music are to be represented by seated statues of Lulli, Rameau, Gluck, and Handel, the latter, though born in Germany, being, as it is said, claimed by England as her own. Every part of the new Opera house, available for the purpose, will be decorated with sculpture or painting.

The new church of the *Trinité* is approaching completion, and promises to be the most sumptuous of all the modern religious edifices of Paris; the original estimates amounted to very nearly £160,000. The sum set apart for the decorative paintings is equal to £6,000, and that for sculpture to £7,680; the tympans of the nave and the gablets have been painted by M. Jobbé-Duval and M. Barrias, the Lady Chapel by MM. Emile Lévy and Delaunay, and M. Balze has executed several works on *faïence* slabs; the sculpture has been entrusted to MM. Cavelier, Maillet, Crauk, and Carpeaux, all able artists, for the four principal groups; M. Guillaume, member of the Academy, has executed four statues; and two other sculptors, MM. Doublemard and Dantan, junior, have other commissions. Two of the most eminent artists in stained glass, MM. Oudinot and Nicod, are engaged on the windows. The Municipal Council evidently intends that the new church shall be a *chef-d'œuvre*.

But a still more important work is spoken of: the district of the Champs Elysées has no church of importance, and it is said that it is under consideration to erect, near the *Arc de Triomphe*, a Gothic cathedral on as grand a scale as any of the most remarkable edifices of the middle ages. This *on dit* has a touch of the marvellous; the Imperial Government is not very likely to undertake a work which, judging from the time the repairs of Notre Dame have taken to execute, would scarcely be completed in the present century;

besides, Gothic architecture is not the *forte* of our ingenious neighbours.

From an announcement set forth by the Academy of the Beaux-Arts, it would appear that an important work is contemplated in connection with the coming Exhibition. A lady, Mademoiselle Esther Le Clère, has, in the name of her late brother, who was a member of the Academy, founded a prize of one thousand francs for the best architectural project on a subject to be given by that body. The Academy proposes, for the session of 1867, a grand Monumental Bridge, situated in the centre of a great city; the bridge to be two hundred mètres long by thirty mètres wide, connecting an island with the two opposite quays of a river. On the island is to be a monument in commemoration of a Universal Exhibition of Industry connected with the bridge by appropriate decorative elements. The competition is confined to natives of France under thirty years of age, and will be divided into two stages after the customary manner here with respect to architectural designs; sketches are to be sent in by the 18th of the present month of December, and on the 20th they will be exhibited publicly, and the members of the architectural section of the Academy will at once proceed to select the six designs which they think best. The authors of these chosen designs will be required to send in complete plans and elevations in March next, when they will be exhibited and adjudged. The successful work is to remain the property of the Academy, but the author is to have the right of reproduction by photography or otherwiso. The terms set forth above can only apply to the Pont-Neuf, which touches, as everybody knows, the point of the old island, the Paris of Charlemagne and Dagobert, and which has been for many years in a very bad condition. The project may, however, be a mere speculative one on the part of the Academy, though the commemoration of an Industrial Exhibition is certainly out of keeping with those classic principles of which it deems itself the sole conservator.

The attention paid to the applications and the history of art is quite as great as that which is devoted to the Fine Arts pure; the collection, exhibition, and illustration of objects of ancient art workmanship form in fact one of the most remarkable features of the time. The City of Paris determined some time since to establish a museum of its own antiquities, and, after some trouble, it has succeeded in purchasing, for the sum of £36,000, a place for its reception. The Hôtel Carnavalet, now the property of the City, has much artistic and historical interest of its own; the famous Abbé of Clagny, Pierre Lescot, furnished the designs, which were carried into execution by Jean Ballaut, in the middle of the sixteenth century; Jean Goujon sculptured the principal ornaments, most of which still exist, though not all *in situ*, or quite intact, and are thoroughly worthy of the artist. Ballaut's work was afterwards continued by the architect Androuet du Cerceau; and in 1634 François Mansard completed it, and took some curious liberties with the arrangement of Goujon's sculptures, part of which he removed from within the vestibule to the outer face of the building, where they still remain. The Hôtel Carnavalet was not the original name of the mansion which was built or rather begun by Jacques des Ligneris, *Seigneur de Crosnes*, and President of the *Parlement* of Paris; it afterwards passed to another family, and then into the possession of Françoise de la Baume, *Dame de Carnavalet*. But the chief historical interest is of a later date: the Hôtel Carnavalet was for many years the residence of Madame, or to give the lady her full names and honours, Marie de Rabutin de Chantal, Marquise de Sévigné, whose *salon* was the rendezvous for all the savants and wits, besides a few of the witlings, of her time.

The mansion stands in the rue de la Culture Sainte-Catherine, in the old Court quarter of François Premier, of which the now calm Place-Royale was the fashionable promenade, the Mall, the Court garden, the scene of the triumphs and flirtations, the intrigues, the duels, the insolences, and the puerilities of that gay, bedizened throng of beautiful women and brave coxcombs that buzzed around a monarch who was declared to be as great a hero in pleasuro as in war, and who made one grand step in social improvement by the introduction of ladies at the royal receptions, with the gallant saying, that "a court without ladies was like a garden without roses."

This once royal quarter now shelters one of the most hard-working sections of the Paris population, and here, amid tho art-workmen of the present day, will be the repository of the *chefs-d'œuvre* of their ancestors. The materials of the museum already exist in part, and accessions will pour in rapidly; the city already possesses some curious collections, ancient plans and pictures, medals and antiquities, and a special bureau has been established at the Hôtel-de-Ville for all business in any way connected with art, ancient and modern. The municipal authorities paid not long since 35,000 francs for the Legras collection of leaden medals, badges, and tokens. We shall watch the growth of the Retrospective Museum of Parisian Art with much interest.

It is said that many illustrations of Paris Art, now in the museum of the Hôtel Cluny, will be transferred to the Hôtel Carnavalet, and they will scarcely be missed from the former which overflows with riches and increases them daily. It has just received a very valuable legacy: M. des Mazis, late of Mayenue, has left to the Cluny Museum a large collection of the artistic iron-work of the sixteenth century, including many beautiful damascened coffers. The samo gentleman has left a fine collection of arms to the Museum of Artillery, and a magnificent silver-gilt plateau, decorated with enamels. M. Mazis's museum was estimated to be worth more than a million of francs.

The restoration of the old château of Saint Germain, and the intention of forming there a museum of Gallo-Roman antiquities, has already been alluded to in our columns; and another historical museum is about to be formed at Pierrefonds, the famous ruin near Compiègne, which has been restored by M. Viollet le Duc. The latter will probably bo devoted to gallic art of the Middle Ages, and thus form a continuation as it were to the museum of Saint Germaiu. The magnificent collection of arms and armour belonging to the Louvre and to the Emperor's private museum has already beeu sent to Pierrefonds, and it is said that the new galleries will be open during the Exhibition year.

A curious question connected with ancient art has just been accidentally solved. The apartments of the Palais de Justice at Nancy have been decorated for a loug period with a number of pieces of very curious old tapestry, which, according to local tradition, ornamented the tent of tho rash and unfortunate Duke of Burgundy, *Charles-le-Téméraire*, who lost his life in the frozen lake or pool of Saint-Jean, when besieging the capital of Lorraine; antiquarians had pretty well decided that rumour was a story-teller when M. Achille Jubinal, author of a History of Ancient Tapestry, discovered in the imperial library of Paris a manuscript, No. 7,406, entitled:—"*Déclaration de plusieurs pièces de tapisseries que quelqu'ung veit longtemps à Vienne;*" in fact, a description of these very pieces of tapestry sent to the Duke of Burgundy by his ambassador in Austria. The subjects of two of the pieces are described in the following quaint terms:—*Grant débat qui fut jadys en la court de la royne Vénus, entre Jeunesse et Vieillesse,*" and "*Condamnation de Souper et de Banquet, sur la plainte portée par Diner en la court de dame Expérience.*" It appears that *Supper* and *Banquet* were both condemned to be hanged. If the good people of that age found supper bad after a mid-day meal, what would they think of tho habits of the present century? This subject is not certainly peculiarly artistic, yet a writer named Nicole de la Chesneraye founded a play upon it which was performed in Paris, before Louis XII. The town of Nancy ought to pay civic honours to M. Jubinal, who has thus raised their tradition to the rank of an archæological fact.

An essay, or, to quote the title as given by the author, "Considerations on the Principles and History of Bas-relief," read by M. Guillaume, the eminent sculptor, and director of the École des Beaux-Arts, at the late annual meeting of the five Academies of the Institute, excited great interest and has since been published by the author in the *Moniteur des Arts*. The paper is long, but well repays perusal. It cannot be said that we moderns show any remarkable ability in sculpture generally; but perhaps there is no branch of the

art in which we are further in arrear of the ancients than in bas-relief. The opinions of an artist of the experience of M. Guillaume are peculiarly welcome. Bas-relief, as M. Guillaume says, has no type in nature: it is a form created by art; but it is a convention so natural that it has appeared at every epoch of art, and amongst all civilised nations. Bas-relief is essentially monumental and decorative, and can scarcely be separated from architecture as a part of which it first appeared. Its first object is decoration; its second to express facts and ideas by means of the human figure. "The first condition," says M. Guillaume, "is that, as ornament, it should properly fill the space allotted to it according to the rules of art. Setting aside the consideration of ornament, and looking at bas-relief only as a means of representing subjects by means of the human figure, it must be regarded in the light of an inscription. It is a style of writing, a language which, conforming to a certain extent to the rules of lapidary style, abridges and condenses ideas, reduces them to the most simple form, and appeals to the eye by the aid of instinctive or understood abstractions with concision and clearness."

"To be clear and concise," repeats M. Guillaume emphatically, "is, in short, the law of bas-relief. Everything in the composition must, in the first place, submit to this principle." These dicta will scarcely be questioned; and when we reflect how modern sculptors have misunderstood, or how far they have diverged from, these principles, it is not surprising how rare is good or even inoffensive bas-relief. M. Guillaume points out the error which existed in archaic times, when the upper part of a figure was often shown in full-face, while the lower was executed in profile, and remarks, that in the best epochs of the art the sculptor confined himself almost invariably to profile. Speaking of the conventional methods of representing some of the elements of the design, he adds: — "Water and flame may be indicated by undulations; as to smoke and clouds, they cannot be fully represented in bas-relief: the positive spirit of sculpture refuses to represent the impalpable. This applies to sculpture in general; but we note the fact here, because the accessories are more important and play a greater part in bas-relief than in the round." M. Guillaume insists on the rule that bas-relief should never include more than two or three superposed planes in the composition, and points out how the Greeks sometimes diminished the thickness of the figures in front in order to prevent their shadows diminishing the effect of the figures in the rear, and indicates the frieze of the Parthenon as furnishing the most admirable examples of this and other artistic arrangements.

In dealing with the subject of light and shadow, M. Guillaume touches on the question of coloured sculpture. He says:—"Finally, the bright and contrasted colouring which the ancients applied to monumental sculpture was not intended to rival what was actually painted, but simply to augment the clearness of the figures, and to give them a fixedness independent of the play of light and shadow." This view is equally a recognition of the value of colour in bas-reliefs, and a condemnation of it in the case of isolated statues, the conditions of which are diametrically opposed to those of bas-relief; the play of light and shade which produces confusion in the conventional composition being the glory, the harmony, the life of the statue.

The young sculptor would do well not to forget the following simple warning:—"As bas-reliefs are executed in marble, in stone, in terra cotta, in ivory, in metal, each of these substances has its own exigencies and capabilities, and, so to speak, a peculiar genius which the artist should study to take advantage of."

"This art always," says M. Guillaume, "bears the imprint of a certain archaic and conventional character. Its effect is to give power and fulness to whatever it represents. In some of the finest works of the Athenian school we find figures whose proportions and forms are expressly made more robust and less slender than those of statues. Lastly, in ancient works the adherence of the subject to the background is always well maintained, the result of which is a solidity which harmonises well with architecture, and which, united with simplicity and power, gives a monumental character to sculpture."

M. Guillaume designates the genius of the Greeks, "full of poetry and logic," as specially calculated to make them pre-eminent in this branch of art; and he quotes their legend of its invention as having a deep significance. Dibutade, a potter of Corinth, say they, created bas-relief by placing clay within a space already prepared—thus intimating that the art proceeded fundamentally from drawing. "The Dorian and Ionian schools, with different aspirations, in their turn gave it impulse; but from the first essays to the *chefs-d'œuvre* of the Parthenon, from the jutting fronton even to the small sketches freely traced with a light point on marble vases and funereal urns, the uninterrupted tradition of the artist was the concise clearness of the idea, the simplicity of the plans, and the perfection of the contours. In their hands (the Greeks') the bas-relief is a language concise without obscurity, and of severe elegance; elegance, which by the manner of presenting the subject, the luminous purity of the form, and the intelligent preservation of the expression, realizes in a plastic form the most delicate qualities of the art of speaking well. And the sculptors thus produced exquisite works, the contemplation of which delights the imagination, while the study of them will ripen our judgment."

M. Guillaume points out how the Romans failed to seize the true principle of bas-relief, made it subservient to the political and religious demands of the moment, applied it to pomps and triumphs, and produced generally nothing but showy ornaments. They missed the conventional sense of the art. But M. Guillaume says, that the theory of the art was never entirely lost, in spite of the imperfections of its application; and the image-makers of the middle ages, although wanting the sense of beauty possessed so eminently by the Greeks, executed bas-reliefs on true principles, but the artists of the renaissance were so carried away by the love of painting and the application of perspective, that sculpture suffered severely, and bas-reliefs grew to be nothing more than pictures in sculpture. Deploring the failure of the great artists of Italy and France with respect to bas-relief, M. Guillaume pays a just tribute to Jean Goujon, who, by the force of his own genius, broke through the false practice, and "produced works which, as regards the skill in the treatment of the plan, rival the finest productions that Athens has bequeathed us." This is only justice to the great sculptor, who, in an age of passion, violence, and false taste, seemed to have possessed the gift of almost absolute purity and grace. It is only necessary to study one of his nymphs of the Fountain of the Innocents, to see that the sculptors since his time are at least as far inferior to him in this respect as he was to the Athenians.

The distinctive difference between painting and sculpture in bas-relief is well expressed in the following lines:—

"Bas-relief starts from a positive imitation of objects, while painting depends upon the optical illusions; so that, if design applied to the latter is an incessant employment of the rules of perspective, the design appropriate to bas-relief is in its essence purely geometrical."

In spite of the talent of the artists, the principles of bas-relief were utterly neglected in Italy under the influence of Bernin, and in France under that of Lebrun, and the evil had grown to its height when accident turned back the current into the right direction. "David, in founding his teaching on ancient sculpture, forced back bas-relief into the true path. About the same time the admirable works of the School of Phidias were discovered at Athens. Still later, Lord Elgin carried a considerable number of these to London, and the models were multiplied by casts—happy concurrence of events which, by the force at once of reason and examples, carried back bas-relief to the purest source."

THE WINTER EXHIBITION OF THE SOCIETY OF PAINTERS IN WATER-COLOUR.

IN our last we noticed the Fine Art Exhibitions which had opened their doors when we went to press. Not least in our regard, "The Old Water-Colour Society" now claims a few lines; and it is pleasant to note that the old acquaintance, still strong and hale, shows little, if any, of the sere and yellow leaf. The gaps that time and secession have made in its ranks are worthily filled up, while veterans enough are on its muster-roll to constitute alone a strong force.

That manual power and mental grasp still abide with the old fraternity none may doubt who scan the wild and tempestuous "Deathride" by Mr. John Gilbert, or the same artist's "Siege of Calais;" or James Holland's "Llynn Idwal," a magnificent drawing, in which the desolate majesty of a mountain wilderness is felicitously conveyed with most artistic concealment of all artifice; or the younger Coxe's "Arenig, from Lake Crwyni," to which the lover of wild nature shall turn and return; or E. Duncan's poetic "Snailholm Tower," gauntly frowning over a lonely Scottish moor; or Alfred Fripp's "Ruin on the Roman Campagna;" or Branwhite's grand gallery work, "An Old Lock" (this claims to be seen two or three yards off); or, again, Duncan's "Snowdon, from Lake Llydaw," and T. M. Richardson's great "Benvenue."

In the class, again, who thus capture the eye and the intelligence by *tours de force* must be numbered Mr. Cullingford Smith, with his broadly-treated "Scene at Watendlath," that picturesque mountain village that is perched among the Borrowdale Fells, high up above the better-known Lodore. Mr. Alfred Newton thus arrests us by his "Cucullin Hills," where the wrestle of the dawn with a sea-mist is surprisingly rendered: and so, perhaps, we might go on, until no room was left for a word about masters of another order.

The men who more delicately weave their spells are many in number, and withal very strong and successful. The "High Street of Conway," for instance, by Mr. Collingwood Smith, is a wondrous piece of perspective; and in "The Canino Real, Toledo," Mr. E. A. Goodall has succeeded in producing one of the most effective bits conceivable with the fewest lines and the thinnest washes of colour; and with these we may range the "Prague" of S. Read, who has carefully sketched and lightly tinted the eminently picturesque forms seen from the Nepomucene Bridge in that city.

The lover of nature condemned to winter amid the fogs of Thames may here come and dream of country life among the charming works of Mr. J. J. Jenkins, who draws his inspirations from the many well-loved scenes at Wargrave, Shiplake, and thereaway; or with S. P. Jackson, who seems to work the same ground with no less truth of feeling; and the "Summer Twilight" of the latter and the "Knole Park" of the former are among the many examples of their fascination. More sensuous—and fascinating too, in another way—are the high-coloured, warm-toned performances of Mr. G. H. Andrews, whose "Dort" and "St. Bennett's Mill" are splendid examples; the dancing ripples and glistening leaves of Naftel; and the elegant yet forcible figure studies of Miss Gillies and H. P. Riviere.

The fourth screen is a constellation in which shines Birket Foster, with three studies of "Skies" and three of "Trees," to praise which would to us seem almost an impertinence. With him are William Callow, Joseph Nash, Henry Gastineau, Frederick Tayler (whose glossy-coated steeds are the delight of the equestrian order), and the masterly cattle-painter, Brittan Willis—an able recruit from the ranks of the oil-painters—all in fine form. They are a strong array; and such favour does their elegant art now find with the public that the comparatively few works they offer for sale are very rapidly absorbed, to decorate the drawing-room and the boudoir.

REVIEWS.

Recollections of the East. By a SUBALTERN. Day and Son (Limited), London.

THE individual who can return from the East without interesting reminiscences must be remarkably devoid of imagination, or powers of observation and comparison. The religionist will have his memories of dreamy mosques and fanciful pagodas, sacred to the prophet of Mecca or the frolicsome Krishnu. The sentimentalist will muse over the departed glories of marble and gem-bedizened palaces, and people them again with gorgeous Rajahs and lovely Cashmerian girls. The artist will meditate upon airy pinnacles and delicate arabesques, upon picturesque groupings in bazaars, and the thousand charming combinations in form and colour of a life totally new to him. The naturalist will think of all the delights afforded him by animal and vegetable kingdoms, so different from those of his own more temperate climate. But the recollections with which it is our present purpose particularly to deal are those of the humorist, returned from serving Her Majesty in British India. Ours shall be memories of braudy-pawnee and pig-sticking, cricket with the thermometer at 100°, and regimental messes with the punkahs swaying over the tables and the turbanned kitmutghars standing behind their perspiring masters' chairs. We have before us, in a haudsomely bound book, well adapted to lie on a drawing-room table, a series of excellently-executed photo-lithographs, in which a number of striking scenes of Anglo-Indian life are represented with delicious humour, yet with perfect fidelity. Our military artist carries us through a succession of most amusing episodes in a young officer's Indian career. They commence with his arrival, when he is beset by a crowd of obsequiously salaaming natives, who present their "characters," and beseech the sahib to take them into his service, volubly uttering the while a thousand protestatious of their punctilious honesty and everlasting faithfulness; and they terminate with his departure, when he hurries on board ship, pursued by the same, insisting that their just demands upon his purse have not been liquidated. We have "our station," "our bazaar," "our band-stand," "pay-day," and numerous other comical, yet artistically conceived pictures. There is the "frightful position of Stumpkins," who, when out tiger-shooting, without the old-fashioned but comparatively secure elephant, "in a second, sees the panorama of his life pass before his bewildered brain;" and the difficulties encountered by Lanky, in the less perilous but still dangerous sport of pig-sticking. We have the battalion on parade in the misty morning, and the same on the march, their solar topees just visible through the clouds of dust, and a few palm-trees towering above bayonets that glisten in the fiery sunshine. There is always, we may observe, in these drawings an expression, ranging from the satirical to the merry, upon the sun's countenance; as though he was chuckling over the torments he was inflicting upon the intruders into his favoured domain. We have "our theatricals," too, in which the gentle heroine is represented by a shaven warrior; and "our ball," whereat some two or three fair ones have to waltz by turns with about nine times their number of languid cavaliers.

Our artist has managed to convey, with all his fun, an

admirable impression of the heat and aridness of India in the hot season; and has really depicted most vividly, considering the slightness of the sketches, the characteristics of the country. His faces, too, both of natives and Englishmen, are wonderfully distinct and natural in their features and expression. The solemn, wise-about-nothing sort of aspect of the former, and the half-ennuyé, half-discontented look of the latter, who, at the same time, do not appear by any means incapable of enjoying life, are both accurately portrayed.

Bombay appears, from internal evidence of the costumes of the natives and aspects of the scenery, to have been the presidency in which these sketches were taken. Any young gentleman, who may be ambitious of proceeding thither as an officer of the army, may be enabled to derive from them a very just idea of the sports and luxuries of which he may partake, and the dangers and discomforts to which he will be subjected. Let him, however, beware of not balancing the latter duly against the former, lest, after his arrival in India, he should too late discover the life, depicted in such softly glowing tints in the warm light of his fancy, to be very much too hot for him. These pictures are exceedingly humorous; but the atmosphere of a room at 90°, even with every appliance for keeping the place cool, is no joke; and the mosquitoes and flies, which may be observed, especially in one of the sketches, buzzing about the head of the youth, as he vainly courts repose upon his couch, are most irritating realities. If they be properly studied, and their delineations of pain carefully considered with those of pleasure, we do not think that these drawings, though we pronounce them, can be said to represent the existence of an Anglo-Indian altogether under too seductive an aspect.

NEW MUSIC.

MESSRS COCKS & CO., of New Burlington Street, have sent us for notice three recent songs by Mr. W. T. Wrighton, and Mr. F. Godfrey's tuneful valse "Helena," about the latter of which and its capital introduction there can be no two opinions.

Mr. Wrighton has a very enviable reputation as a composer of "drawing-room" ballads. Much is implied by this term of classification; and the musician who can observe the hard conditions dictated by the pretty tyrants of modern society, and, at the same time, produce something meritorious in its way, is decidedly markworthy in his generation. Mr. Wrighton does not write for posterity, and sacrifice himself upon the unremunerative altar of high art, but endeavours to meet the exigencies of the day by fashioning ballads, which shall possess a certain charm of simple, straightforward, unaffected melody, together with accompaniments of the easiest possible description. His melodies are generally tender and expressive, and his treatment of them as refined as it is correct. "They tell me I am quite forgot" is precisely the ballad "of the period." The melancholy sentiment of the words (by Mrs. Evans Bell) is fully realized in the music, and the composition (in B-flat) is suitable for a mezzo-soprano, or even a contralto. "Grieve not for me," a song which last season was made popular by Madame Parepa, is in G, six-eight time. It has a range between E and F-sharp, and is available for either male or female voices. In "A wearied dove" Mr. Wrighton is not particularly original, as far as subject goes. The modulations are smooth and pleasing, and the delightful motivo in D-minor must charm all.

CORRESPONDENCE.

To the Editor of NATURE AND ART.

SIR,—To those who are fond of natural history, the following incident showing the fondness of animals for music may not be unacceptable. Some, it is well known, have the greatest detestation of it, the canine species amongst the numbers, as our ears can too well testify to; but I never heard of it occurring before in a case such as I am about to relate. Some few years since I had a hare which I turned out in a large walled garden: it was what is usually termed a *tame* hare, though wild enough when any one entered the garden. I was amusing myself one night, as was my wont to do, on the harmonium, which was placed by the side of the parlour window looking into the garden. After playing a short time, I was rather startled at hearing a tapping at my window. I stopped for a while, and then resumed my playing; but I had scarcely recommenced when a repetition of the same noise occurred. "Well," said I to myself, "I can't stand this;" so I shut up the instrument and sat down by the fire to read. In about half an hour after I opened the instrument again, and had not been at it many minutes before the same noise occurred; so I bade good bye to my amusement for *that* day. On the following night I again commenced playing with the same result, wondering what could be the cause of the noise and being obliged to cease in consequence. This state of things occurred for three or four consecutive days, when the mystery was made apparent. I was as before playing when the noise recommenced, and I thought I saw a movement at the window, and looking towards it I found to my surprise that my hare was seated on its haunches, and its two fore-feet were resting against a pane of glass, so that the noise I heard proceeded from its drumming against the glass with its paws. I can but consider that the animal was pleased with the sounds, or why should it have been attracted so to the spot from which they emanated?

As happens in most cases to pets, so was mine no exception, for it met with an untimely end. I was one Sunday evening playing to a clerical friend, when we were startled by a screech from the hare, which was making its way evidently to the accustomed spot. I flung up the window, calling out "The hare, the hare!" but my friend and I, candles in hand, searched in vain; so we presumed it had escaped from the claws of the cat, which had been alarmed by the window being thrown up. Next morning I was dressing, when I saw pussy stealing its way towards a carrot-bed, and, as it passed up one side, the hare jumped out on the other. I loaded my gun as promptly as possible and went into the garden, but puss did not wait for a warm reception. I went out for a ride, after breakfast, and returned about one o'clock, and as I looked out of my parlour-window I saw a cat asleep on the steps opposite, and, opening the window gently, I shot the supposed enemy of my musical pet. I now flattered myself that the danger was over; but, in my sleep that night, I thought I heard a screech, and from that time to this I saw no more of my hare; for I had either shot the wrong culprit, or some other cat, of equally epicurean taste, had carried it off—and, no doubt, feasted "right royally." G.

NATURE AND ART

February 1, 1867.]

BIZZ AND HER FOES.

By Mrs. S. C. Hall.

IN THREE CHAPTERS. CHAPTER II.

"I LET my coal-shed to a very plausible, good-for-nothing fellow," said Mr. Hatchment, "who promised everything, and never kept his word; he was an Irishman, but I do not desire to reflect on the country—some of my best customers are Irish, and I only wish I had double the number. He brought Bizz with him; she was a slight young thing then, a pretty, shiny, active dog, and in time had her second litter of pups; he never paid his rent—I offered to forgive it to him; he would not resign possession, but kept the key, though there was nothing in the shed but a few sticks.

"I ought to have told you, ma'am, that when first he came to the place I gave him five shillings for the dog, but when she had pups, Mrs. H. found her inconvenient, and so the fellow said he'd take care of her for me in the shed. When things went bad with him,—and I heard since that the dog never belonged to him nohow, as the lawful owner left her in his care, and paid a shilling a week, or something more, for her board and lodging,—he would go away and leave her there without food or water. I used to thrust her in some through a hole, but I dare not go near the door, which she understood she was to guard! The fellow had put her up to all sorts of tricks.

"One evening, a pair of policemen came with a search-warrant; they had information that some stolen goods were in the shed, and they set about breaking open the door, but the poor faithful animal, who was reduced to a skeleton, had determined to withstand them to the last. One of the men wanted to shoot her, for she looked all teeth and fire, but I would not consent, and it was a sight how those two great men were kept at bay by that small dog, until one of them bethought him of a stratagem; the hole through which I used to push her food was close to the straw where her pups lay, so he proposed that his companion should withdraw a pup, and pinch it to make it cry, while the other effected the entrance, for well he knew that the poor mother would go to her pups. He calculated," added Hatchment, "on the strength of her maternal feelings.

"When he got the little beast outside, he pinched and ran with it to my house, and Bizz in full chase. Of course the policeman turned out the other pups, entered, and locked the door. As there were four pups, poor Bizz had enough to do to carry them to shelter, for two had crawled into a pool of water.

"The men did not find the goods they expected, but I regained possession of my shed. I never saw or heard of her master since, and the poor thing attached herself to me, chiefly because I saved the last of the pups from drowning. She is a wonderful watch, and if Mrs. H. or I left her in charge of our dinners, she'd die dead of starvation before she set a tooth in anything, even sheep's heads, which are her favourites; but once out of the house, she knows no law, only to take and keep what she fancies.

"You know the best and the worse of poor Bizz now, ma'am; there she is, an ugly customer, but as good a watch as ever winked at a thief. She likes to have a yard of her own, and it's all the better if she can't get out of it.

"Go to the lady, Bizz, and be as faithful to her as you've been to me! Mrs. H. will see the loss before the month's out in apples and oranges, and want a dog in that time as badly as now she wants to get rid of one; but," he added, forgetting his usual politeness, "that's the way with the women,—leastways in greengrocery. She's turned as hard against the dog as a frozen turnip; she's shut her eyes against the good, and opened them on the bad wider, and forgetting past services, is the worst foe the beast has,—worse than cats or boys. But don't mind it, Bizz, if the lady won't have you, I'll give you as easy a death as if you'd been a lady's lap-dog all the days of your life."

Bizz looked up at her master's round, rubicund face, into which he was endeavouring to impart an expression of sentiment, as if she said in her hard, dry way—"Don't be a fool, Hatchment," and with another wink at me, she curled herself round

the top of the potato-basket, while her keen eye shone like a star above her determined tail.

"Please, ma'am, am I to send over the dog and the potato-basket?" inquired Hatchment, as I was leaving the shop.

Now, whenever I am undecided about anything, I fall back with the most wifely meekness upon my superior, so I answered, "I must ask my husband, and will let you know."

"Oh!" said the greengrocer, while a bright smile illuminated his good-natured face, "it's only to tell him I'm going to drown the dog, and he'll have her, I know that. Bizz, you're sure of a good home now, old girl, for life."

Hatchment was right.

The following day, Bizz and her favourite potato-basket were installed in the little yard, the potato-basket in comfortable shelter, and, lest she might escape through the coach-house or stable into the Gloucester Road, the communicating door was locked, the yard being considered by cook the weak point of our *premisees*, as she pronounced it.

The manner in which cook altered, and refined, and elongated the English language, in her desire to be considered *English*, would have been exceedingly amusing, if it had not in time, as I have already said, quite destroyed my belief in her veracity: that made me uncomfortable. If I used an Irish phrase, or relieved an Irish child (she was as steel against a full-grown Irish pauper, but a ragged child melted her heart), she would turn away, muttering, "May the heavens be your bed when the time comes!" or, "The Lord blesses the dew that falls on the young corn." Tears would rush into her great grey eyes, at any tale of distress connected with Ireland. It was the time of the cruel famine which fell upon my poor country, and I received subscriptions, to assist in even so small a way the good Samaritans who came forward to aid their fellow-creatures in their time of sore need. Our servants, and the servants of many of my friends, brought me their mites, and children, now grown to be brave men and good women, by rigid self-denial heaped their pennies together, and not only gave a donation great for their small means, but continued their half-penny or penny a week despite all temptations, until there was no longer need of help. Cook's donation was very liberal, and she thus, so to say, *excused* it:—

"I'm sure I've no call to the country, or the country to me, only in memory of my dear grandmother. I ought to do my best, for it's no rest on my bed I'd get if I thought one of her people wanted anything I could send; you've no right, ma'am dear, to be evenin' the country to me. I'd never have come to live with an Irish lady, if I'd a' thought she'd lay claim to me."

"Well, cook, it is very easy to remedy that now."

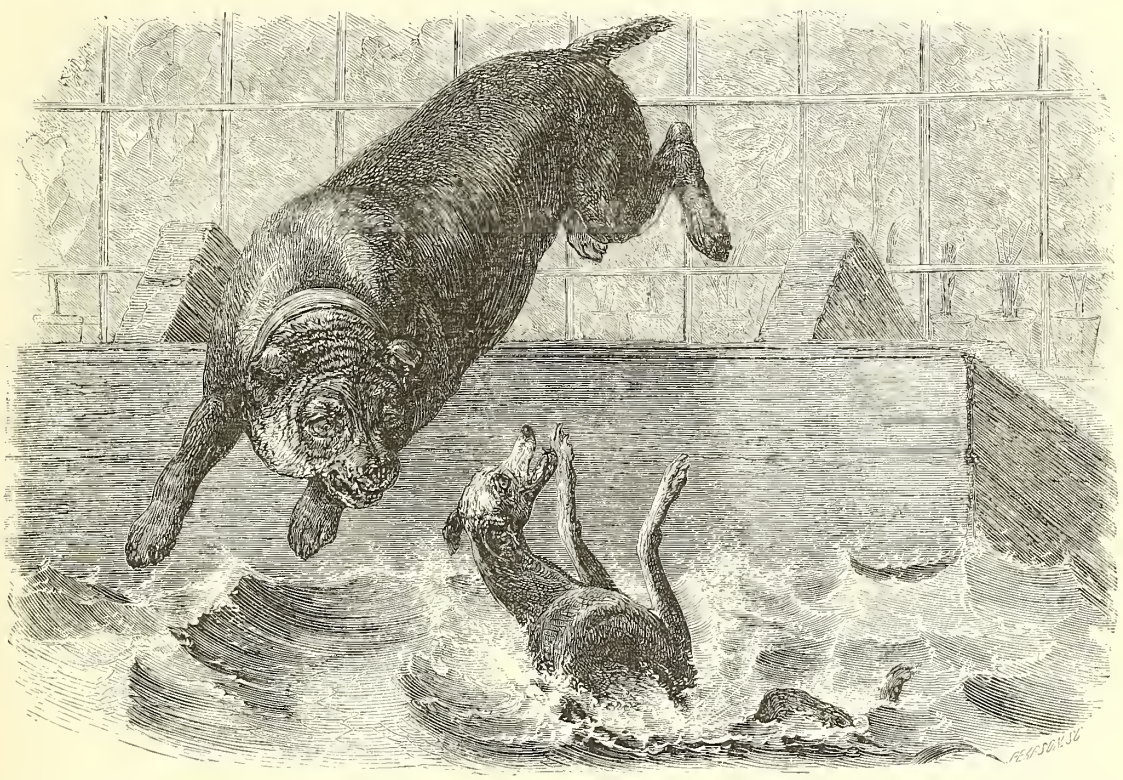
"Oh, don't! I beg your honour's pardon. I did not think you'd get that maning out of it, only I never could bear any one to take me for Irish, just out of my grandmother."

I do not think that Bizz enjoyed the security and tranquillity of her new quarters half as much as her more active life at the corner of Steward's Grove. Not that she was forgotten by her foes; the greengrocer and butcher boys seldom passed the yard gate without drawing a stick across it, in a manner peculiar to boys, accompanied by "Hallo, Bizz, old girl! how's your sheep's head?" or, "Bizz, my beauty, how's your eye?" This Bizz found very hard to endure, and I have seen her tearing the wood of the gate with her sharp, strong teeth, anxious to revenge the cruel insult. The cats, too, found her out, and would sit on the wall aggravating her, so that cook had to spend a considerable portion of her time in dislodging them. Bizz and cook used to hold confidential communications together, in cooing sort of whispers, and in what was an unknown tongue to all but me, who observed that whenever cook murmured to Bizz "Thurum pogue," the animal would stand on its hind legs, and endeavour to lick her face or hands. I spell the words perhaps not correctly, but as it is pronounced. "Thurum pogue" means in Irish "Give me a kiss." I would have asked in the most direct manner if Bizz was Irish born, but I knew cook would deny it, and the manner in which the dog pricked her ears at an Irish voice, and screamed and jumped with delight when a passing organ (patronized slyly by cook,) ground out "St. Patrick's Day," told a tale poor cook would not have liked to tell. Dogs are frequently affected by particular tunes. I have one of the beautiful dogs of Malta, who, after washing, looks like a heap of snow-flakes, and this creature, by name Tiny, recognises "God Save the Queen" with determined loyalty, joining in, if not in excellent tune, certainly in good time; she takes no notice of other music. Even so did "St. Patrick's Day" excite the patriotism of "Bizz, the baste." Indeed, I once caught cook dancing a jig to this very tune, which she whistled *sotto voce*, to Bizz, snapping her fingers, "covering the buckle," "heeling and toeing" it, to perfection, while Bizz capered on her hind legs opposite to her, changing sides with marvellous dexterity. The other servants were out for a holiday, and cook thought I was in the green-house. She had brought Bizz in to tea, and after tea, doubtless wished for a little national exercise. It was a scene never to be forgotten, particularly the conclusion, when Bizz sprang from off the ground into cook's arms, and they hugged each other with every demonstration of affection. Bizz winked, and absolutely moved her tail in a near approach to a wag, and then there was such "cooing" and whining, and "cushla machreeing," as I never heard before!

After this, I felt that Bizz and cook were united by the memory of some early companionship or affection, which was kept a profound secret from me, though I half suspected it was known in a degree to Hatchment.

Certainly the dog was a character. At first, she licked her lips at the Italian greyhounds, as she used to do at the cats, and they, pretty things! arched their necks and tossed their heads disdainfully, as they passed the trellised gate, which,

though it prevented any assault, did not prevent their eyeing each other; but in a short time Bizz understood that they belonged to the *premisees*, and took them under her protection, a guardianship particularly ignored by Ninon, who believed she could protect herself. Folly was a desperate little fool. I only wonder now she passed through life at all: she was always getting into difficulties. One day she sprang into the dripping-pan, and scalded her pretty feet with the hot grease; another time she ran up the steps, and jumped into the water-butt, where she would have been drowned but for



Bizz, who, having seen the accident through her trellise, got up a tremendous outery, and when cook opened the gate to ascertain the cause, made a rush up the steps, dashed right into the butt, and effected an immediate rescue. Of course cook made the most of that piece of sagacity. Had it not been for Folly's delicate and exceeding beauty, I could not have tolerated her stupidity and absurdity as long as I did; but beauty cannot make a long stand against real disadvantages; she was a most helpless anxiety, and was totally devoid of affection. I gave her away at last to a person who already possessed two pugs, a skye, a Russian poodle, and a huge mongrel Newfoundland. I forget her name, but I remember she was always called "the dog lady," and very fond she was of Folly.

The untiring watchfulness and sagacity of Bizz interested us more and more: she declined our caresses, and was quite independent of sympathy, but whenever I whispered *Thurum pogue*, or *cushla machree*, or *avourneen*, she was on her hind legs in a moment, her rough nose thrust through the bars of the garden gate, and her red tongue extended to its full length, in the endeavour to lick my hand. If I went still farther, and sang a few bars of "St. Patrick's Day," her queer face shrivelled up into a grin, and she dodged about on her hind legs, evidently expecting me to do the same; until doubtless offended at my declining her as a partner in a jig, she would drop down suddenly, and slrink back to her refuge in the potato-basket. Despite her confinement, I really think this would have been the most tranquil time of Bizz's life, if she had not been roused and irritated by the boys in the road and the cats on the stable-tiles; they tormented her terribly, and did so with impunity, as she could not get at them: she was well-fed, and many a time during the day, and especially in the twilight, cook stole into the yard, to hold converse with her favourite.

So matters continued: until one morning as I was passing from the front to the back garden, a rough voice from the road called out without ceremony or introduction,—

"My lady, that's my dog!"

I went to the gate, and asked the man if he had spoken to me. The reply was:—

"Ay, indeed, my lady,—the dog in your yard is my dog,—I know her by her *wicious woice;* there isn't such another all over the world; and by the same token her name is Bizz."

I replied that the dog was ours; it was given to

us by our greengrocer Hatchment, who had a right to dispose of her as he pleased.

The man sturdily persisted "that the 'baste' was his, and he'd have it, if there was law or justice to be had in England," and he placed his hand resolutely on the gate, which, as usual, was locked inside.

I told him he should not have the dog unless he proved his right to it;—just as I said so, cook, who had only heard my voice and only seen a rabbit-skin cap above the rails, came from the kitchen, straight to the gate. Instantly, an exceedingly rough and dirty hand was thrust through the bars, exposing also a thick and bony wrist, accompanied by a shout so loud, that all the dogs barked, the toll-man's magpie chattered, and the toll-man poked his head out of his sentry-box.

After a variety of ejaculations the voice subsided into words,—"Oh, Molly O'Gorman, and is it yourself that's in it? Molly, won't you give me a shake of the hand for the sake of old times,—though you did cast me off, and never thought it worth your while to inquire whether I was dead or alive. Oh, Molly dear, have you forgotten the babby-house I built you, in the grip of the dry ditch?—and the magpie I reared for you, that stole the priest's spectacles?—and the 'hide-and-seek,' and 'blind man's buff,' and the 'jig' we used to dance in the sweet summer evenings, on the fair green of Ballynatrent" (oh, cook! cook!!). "And didn't your mother send you that very puppy Bizz—when I was so broken-hearted that I thought I must follow you to England: and it's cruel hard you were, Molly my jewel,—and I that carried that pup that your mother sent you, I may say inside my skin, I took such care of it! Maybe it's the English air that's taken the sight out of your eyes, and the hearing out of your ears, and turned the tongue in your head, and the heart in your bosom, into cowld stone, so that you won't see or hear or spake to the wild bird of your own mountain. Didn't I train that *baste* into all sorts of tricks,—and the time you broke your leg, what amusement had ye? Only the dog. And if I made a highwayman of myself, and if I did lose my character,—oh, Molly, it was you that did it, for you wouldn't spake the word that would save me, and you know, that at Ballynatrent, when you turned first against me, no one could say a thing to my disadvantage, that might not be said against twenty others, as well as myself,—and there you stand now, as stiff as the round tower on the Rock of Cashel, without a smile on your lip, or a tear in your eye, or a 'save you kindly,' to a poor craythur, who,"—and then followed a recapitulation of the same story of their early knowledge of each other, mingled with protestations of regard, and the fact of his bringing Bizz over, a present from her mother, "under his skin," for "safety."

To this cook listened with forced calmness: the shame that she should stand before me a certified Irishwoman, after all her protestations to the contrary, overwhelmed her: then her pride received a terrible shock by such a ragged disreputable looking fellow having been at any time her friend and neighbour. I withdrew a little way from the storm that I fancied was brewing (for I had never noted patience or forbearance among cook's virtues), observing in an undertone that "she had better speak to her friend inside, than outside the house, for that the tollman and his magpie were listening to all that passed." But the poor woman was quite crushed. In a moment she was on her knees at my side, clinging to my dress, and struggling for words: at last she managed to say:—

"Send him away, oh, mistress dear, send him away. I wouldn't let the door of your house be darkened with the likes of him: oh, you don't know the pisoned drop that's in him—I'll give him my quarter's wages, ma'am, if he'll take an oath to the priest not to come near me, only don't let him have the dog my poor mother sent me: it's thrue he brought it, but it never was his, as I'd prove in a law court, rather than let him have her, though I'd die alive with the shame to own him for my countryman, or to let on before the English that I'm Irish, and he to the fore! Oh, lady dear, save me from the liar's shame, and don't let him have the dog. She's dead now, my poor mother, ma'am, and that dog is the only thing belonging to her I can look at or touch. I know his wickedness; as I'll have nothing to say to him, he'd murder the dog before my eyes; he tried it once, and that's the way her lip was split. She took care of his shed, because it was in her charge, but she hated him, and was under no compliment to him in life, for I paid for her board and lodging, though it's little I had to pay it with. Send him away, ma'am dear, only don't, don't let him have Bizz."

I said, "For all this I am sorry, but what proof have I that you are telling truth now?"

She looked earnestly in my face, and the words came trembling from her lips,—"I never told you but the one black lie, denying my country, and sure you didn't believe me, and what hurt was it to you?"

"Not to me, Mary, but to you; it prevented my believing in you."

"Believing in me!" she repeated, more than once: that was perhaps the first moment she felt the injury untruth does the untruthful. "And it was out of my denying my country, you got to doubt what I said?"

"Certainly."

"See that! It was he that made me ashamed of the country, and made me turn my tongue to speak fine English! Maybe you won't believe what a villain he is, because I say it; but oh, ma'am dear, if you'd take the stick from him, and let Bizz at him, you'd see what she thinks of him, and *she never told a lie in her whole life!*"

Then slowly rising she added, "But believe me or not, if he ever enters under the roof where I am, or touches that dog, which you sheltered, though it's my dog, I'll make a convict of myself." After expressing this determination she walked into the house, regardless alike of the man's entreaties and reproaches.

I told him in a few words that he must leave the gate, as it was evident my servant would hold no communication with him, and that from his own showing the dog was not *his*, but hers.

This seemed to him a new reading of his claim, "Maybe I deserve her to seal her lips against me, my lady, but it's hard, so it is. We war neighbour's children close to the fair green of Ballynatrent, and I wish I had never left it: if she would only say 'I forgive, and God bless you!' but she was always mighty high in herself, and would make no more allowance for a boy like meeself, than she would for a girl who has the grace of God in her heart an' her eyes from her cradle to her grave. Oh, lady, if you'd undertake my cause, I'd lave you to be judge and jury, and abide by yer law, and that would be the first law I ever stood to, you see, if your honour knew the rights."

I do not think I mentioned that Bizz, doubtless from her Celtic blood, had an intense hatred, not to one individual, but to the whole police force; despite the eight-foot wall that shut her in, she knew the step of a policeman the moment it crossed the road, and saluted the sound with a shrill, short, whistling sort of bark, different from her usual warnings; just as poor Rabbit-skin uttered the words, "if your honour knew the rights," Bizz gave tongue, sent forth her police bark, and the erect form of our government protector turned the corner of the Gloucester Road. In an instant, the man started from the gate, and rushed off to the right, while the policeman advanced more rapidly than usual from the left.

He paused at the gate. "I beg your pardon, Madam, but was that man begging?"

"No, he was not."

"He's just out after his last three months; but we've all our eyes on him."

I thought within myself, that if Mary had heard the policeman confess that the eyes of the whole force were on her "playfellow of the fair green of Ballynatrent," it would rouse her sympathy far more than his eloquence. She thoroughly sympathized with Bizz in her dislike of the "peelers."

That evening, the housemaid told me cook was not well, she had gone to bed, but would not say what was the matter with her.

I found her door fastened on the inside, but she "hoped I would forgive her for shutting herself in, she would be all right in the morning."

I went to the yard, and invited Bizz to come and see cook; she pondered over the invitation for a minute, then winked, and followed me upstairs with much gravity, sniffed and scratched at the door, and was at once admitted. The usual "cooing" and "cushla machreeing" did not follow, but I heard heavy and bitter sobs, and more than one sympathetic whine from the poor dog.

I was sorely perplexed between the real regard I entertained for Mary, and the fact that her residence having been discovered by this good-for-nothing man, it would be painful to her, and perhaps dangerous to us, if she remained in our service. I knew her pride, and the sensibility which is its invariable accompaniment. I believed she was sincerely attached to us, as Irish servants so frequently are to their employers. For some time she did not quite harmonize with the other servants, nor they with her, but that had died out. Though Mary denied her country, she never denied her creed, and I believe never missed an opportunity of standing up bravely for the Pope. My dear mother's maid (according to Mary) was a "black Protestant," and certainly *she* lost no opportunity of boasting that *she* went over to Ireland with the great and good King William, who "saved the country from popery, slavery, and wooden shoes;" *her* prime favourite among the animals was Ninon, who, by an ingenious sleight of hand, when asked to drink a cup of milk to "Dan O'Connell's health," turned away her beautiful head, and refused to lap; but when asked to drink the health of "King William," drank it with a will, and a joyous wagging of her delicate tail. There were two factions in the kitchen, but that of the cook was the most difficult to comprehend, for while she disclaimed her country she did battle for the Pope. At one time the war waxed so fast and furious, that I found Ninon decked in orange ribbons, and the kitchen cat (it was before Bizz's arrival) inconvenienced by a huge bow of green ribbon. I threw both emblems into the fire, and declared that if there were any more party-quarrels, both servants should be discharged, a decision which I found gave the English housemaid great satisfaction.

But this new difficulty was far more perplexing, and after half-an-hour's mental weighing and measuring, I could only arrive at one conclusion, and that gave me a great deal of pain. Just as I was again weighing for and against, cook asked permission to come in, Bizz followed her, and curled herself round at the feet of her legitimate mistress. Mary looked shy and distressed, as she had never looked before, and was painfully at a loss for words; at length she said,—

"Your kind feeling for me, last night, mistress, has saved the life of Bizz. That born villain threw poisoned food over the wall to the poor innocent dog, out of revenge on me, because I would not spake to him: the mean, cowardly *spalpeen*, to turn on the dumb innocent."

I was greatly shocked, and asked for proof.

She stated that one cat, who had been prowling in the yard, was dead, and another poor animal dying; she had herself taken a bone to the chemist's, and he said it was powdered with poison.

The act was so un-Irish, that I was slow to believe Rabbit-skin had been guilty of such cowardice and treachery. I told her so.

"May the Lord help your innocence!" she ejaculated; "but the nature of him ever and always was to go through fire and water for revenge. I know him to my sorrow, an' so I ought,—he's my husband!"

I could not help repeating the word "husband!"

"Not all out," she added, "though we war' book sworn to each other, an' we little more than children; but just as I would have kep' my word to him it

was the Lord's merey that saved me. Sure I found he had another wife, a poor motherless girl, that he won to go to the priest with him, in less than six weeks after she first saw him !—more fool she, and she with a tidy trifle of money !"

"Then he has a real, living wife, Mary ?"

"If you please, ma'am, he has not."

"Why, you said just now, he had."

"*Had* isn't *has*, ma'am; she's dead, happy for her ! it is the readiest way to get rid of a blaekguard like that ! She sent for me to ask my pardon just before she was ealled. 'For what ?' I says.

"'For taking Mike from you,' she says, quite natural, 'who had the best right to him.'

"'Don't mention it,' I says, 'you did me the greatest kindness in life.'

"'But you'll have him now,' she says, 'and you'll be a far better wife than I have ever been,' she says, that did the work to be buried with him, that he might have it handy when he met her in the next world ! But what I'm wanting to say is this—I must lave you."

There was a long pause; rivers of tears rushed from those great, grey eyes, and that dear, ugly dog stood on its hind legs, gazing into her face with mute agony, until, at last, the woman sank down beside it, and laying her face against the dog, wept long and bitterly.

"I could not stand the plaee," she said; "why, this very morning, when I was washing the steps, the tollman's magpie kep' on screaming, 'Good-morrow, Paddy.'"

I reminded her that the bird had done so these two years.

"But I eouldn't bear it now; moreover, I know that man will be hung, and I've had disgraee

the poor, misguided eraythur, who was a born slave to him, the dirty tyrant. So I knelt by her side, where there ought to have been a bed, and I swore to her that I never would have hand, aet, or part in him, and with that a smile eame like light over her poor, white faee, and her eyes shone for a moment with a joy past telling.

"'Then,' she whispered, and they war her last words, 'then you won't eome betwixt us in the next world.' As if she had not had enough of him in this ! Oh ! then, it put me in mind, though I don't know why, of 'Sim of the Stiek,' as we ealled him, who beat his wife regular every week for forty years, and when he was dying ordered the shillala enough out of him already. He'd never rest, either, till he had the dog's life or mine ! He'd think as little of taking one as the other; sure, I know. So, ma'am dear, a eousin of my own sails with his family from Liverpool to Melbourne next week, and I and my dog will go with them; the bad thing is, leaving you unprovided, but you have only to hould up your finger, and you'll have loads of eooks. I eouldn't live here, and you knowing what you do about me ! And every time the dog barked, or the bell rang, the terror of him would eome over my heart, and I'd be like in a fog, or a dead woman, all out, and no heart in my work; not all as one as I used to be when I knew he was safe in prison;

sure, I'd do nothing but watch for a ring of the bell day and night, and afeared to answer it; and not able to let the dog out of my sight, for if he wasn't hung for me, he'd be transported for her. I knew well how you hated black lies, but I committed no falsity about Bizz. I told the bare truth about her; the yard did want a watch, and she's as true as fire to flint. If you'd ask me was she my dog, I'd have said—I think I'd have said the truth; or, maybe I'd have thought it only a white lie. Oh, yes, I know what you're going to say, that no lie can be white. But God bless you, ma'am, dear, for the shelter you gave her! and I hope the Lord and your honour will forgive me, and may the power above keep all young craythurs from even the *shadda* of a bad man, for the very *shadda* stains the snow it rests on. I've seen the rose in June wither away from a blast, and drop leaf by leaf, until nothing was left, but the poor mouldy heart: but that's nothin' to the blight of the young living soul. Wasn't I ashamed to think that man and I war made out of the same sod, neighbours' children, with only one potato-garden betwixt us?"

"Then, it was not that you were ashamed of your country, Mary," that made you deny it, only you were ashamed of your countryman!"

Her face was illuminated in a moment, and she sprang from the ground where Bizz and she had crouched together.

"That's it—God bless you—that's just it."

And then she recapitulated again, glancing at me occasionally, and saying,—"But maybe ye don't believe me, maybe it's thinking of the lies I tould, you are."

Mary volunteered to make a "clean breast," but I saw it was impossible: like us all, in the hidden recesses of her poor heart, something was stowed away, known only to her own thoughts, that refused to come forth. She stumbled in her disclosures, though I asked no questions, but listened to what was told, wondering at the contradictions even in her nature, and seeing amid the chaos, how her devotion to her mother's memory strengthened all that was good within her.

The day soon came for her departure. Bizz's foes pursued her to the last; the morning she left, she did battle with a fierce cat, which so irritated her temper, that for some time it was impossible to get her into a cab, while the magpie kept croaking, "Poor Paddy, poor Paddy!"

At last, Bizz, encircled by her friend's arms, drove off, bestowing on me one of her most emphatic winks, while her lip trembled.

A BUNCH OF FIR CONES.

By W. B. Lord, Royal Artillery.

WHAT say you to being my companion in an expedition to the fragrant pine forests, where the fir needles strew the ground, and form a soft brown carpet, over which we noiselessly wend our way? Solemn stillness reigns amongst the tall straight columns, as in some vast cathedral, and save when some passing gust sings and whistles amongst the feathery foliage, or a chance group of busy cross-bills are encountered, twittering and chirping contentedly to themselves, as they hang parrot-like amongst the branches, and wrench forth the sweet seed from the scale-coated fir-fruit, few sounds disturb the meditations of the explorer. We will, therefore—should you feel so disposed—ramble on together, gossip as we go, and gather such bits and scraps of pine lore as good fortune may cast in our path, and, like our cheerful merry little friends, the cross-bills, glean our harvest amongst the cones. Few trees of the forest are more graceful in form, generally useful, or of more extensive range than the Larch. The Romans appear to have extensively availed themselves of their forest discoveries, and the larches found by them during the German wars were felled and sent from the Alps *vid* the river Po to Rome, for the use of the builders. Pliny, in speaking of the Larch, says, "This tree is the best of the kind that bears rosin. It rots not, but endures a long time." The high estimation in which this description of timber was held by him was not undeserved, for it is related that the huge floating palace built by the Emperor Trajan, as a summer residence on the waters of Lake Nerni, was constructed of larch and cypress, sheathed with lead, fastened with copper nails, doubly planked, and the seams caulked with linen rags, payed over with *Greek pitch* (asphaltum). On being raised from the bottom of the lake, this curious structure was found to be comparatively sound after 1,400 years' immersion. Tiberius caused the naumachiarian bridge built by Augustus, and afterwards destroyed by fire, to be reconstructed with larch planks obtained from Rhætia. Amongst the timber brought from thence, was one trunk of 120 feet in length, which is said to have excited the admiration of all Rome. The painters of very early ages (in fact from the period at which Pliny wrote, to the time of Raphael) intrusted their most costly works to the wood of the Larch, which by the great Roman naturalist is entitled *immortale lignum*. Wrileking, too, in his justly celebrated work on the construction of bridges, says that the Larch is preferable to the Pine, the Pineaster, or the Fir, for constructing the arches of wooden bridges.

Switzerland abounds in larch woods, and nearly all the picturesque châlets, fairy bridges, and hanging galleries, over chasms where the raging torrents lose themselves in foam and mist, are constructed of the tough and trusty Larch. The wooden walls of old England, too, of which we are all so justly

proud, were not, even before the days of iron innovation, entirely "hearts of oak," for we learn that in the year 1809, larch timber, grown by his Grace the Duke of Athol, was first used for the British navy in building at Woolwich Dock-yard the *Serapis* store-ship, the *Sibylle* frigate, the bottom of a lighter, and for piles driven into the mud, alternately wet and dry; and in all the various situations proved a strong durable timber. We find it recorded that the *Athol*, of twenty-eight guns, was also built entirely of larch, of the same growth, whilst the *Niemen*, a ship constructed at the same time, was built of timber from Riga. At the expiration of their first course of service, both vessels were officially examined, when the *Niemen* was found so much decayed as to be condemned forthwith, the *Athol* was re-commissioned, completed her second term of service, pronounced sound, and made a store-ship of, when, for a period of more than thirty years she was subjected to the wear and tear of almost every climate.

The Dukes of Athol paid great attention to the cultivation of the Larch, planting it on the rugged slopes and mountain-sides, where land was well nigh valueless. Some idea may be formed of the unwearied industry devoted by them to larch culture when the reader learns that 14,096,719 young trees were planted in the neighbourhood of Blair Athol and Dunkeld, covering a space amounting to 10,324 imperial acres. The trees grew rapidly, and one felled at 95 years of age was 100 feet high, 10 feet $6\frac{1}{4}$ inches round the trunk at five feet from the ground, and contained 368 cubic feet of timber. The Duke who first turned his attention to fir-culture did well for those who were to follow, and sowed the seeds of a golden crop. The value of these vast plantations has been roughly estimated at £6,500,000, without taking into consideration the value of the thinnings, which would be rather over £7 per acre. His Grace was buried in a coffin made from one of the trees he loved so well. That selected for the purpose was of stalwart growth, measured 106 feet in length, and was stout in proportion.

Although the Larch is now so extensively cultivated in the British islands, it is not an indigenous tree. The first mention we have of its growth in England is made by Parkinson in 1629, who speaks of it as a rarity.

Evelyn, writing in 1664, mentions a larch tree of "goodly stature," growing at Chelmsford in Essex, but evidently considers it an uncommon tree. Ben Jonson thus notices it:—

> "Yes, I have brought to help your vows,
> Horned poppy, cypress boughs,
> The fig-tree wild that grows on tombs,
> And juice that from the larch-tree comes."

The substance known as Venice turpentine is procured by tapping the larch-trees, and many parts of France, especially in the Briançonnais, the Valois, and the Pays de Vand, yield it in considerable quantities. Large augers are used with which to perforate the trees. The holes usually commence about three feet from the ground, and reach as high up the trunk as from twelve to thirteen feet. Into these holes small wooden spouts are fixed, through which the liquid resin flows into little vessels conveniently placed to receive it. The south side of the tree is supposed to yield better than those exposed to the other points of the compass. Ovid thus writes of the resinous firs:—

> "The new-made trees in tears of amber run,
> Which harden into value by the sun."

And we are also informed that when Tiberius Cæsar built his "Naumachia," or aquatic amphitheatre for exhibiting a naval action as a public spectacle, an enormous larch was brought to Rome, which measured 120 feet in length, and 2 feet in diameter at the smallest end. It is said that the Emperor was so much delighted with the beauty of the tree that he would not permit it to be used, but retained it as an object for public admiration. Nero, however, took a more utilitarian view of things, and when about to erect an amphitheatre for himself, had it cut up for the purpose.

The Forum on which Augustus sat was composed of larch, as were many of the Roman bridges in his day.

Our friends the Russians are so conservative in the matter of larch timber, that its exportation is prohibited. Oak you may have by paying for it; but larch is a government monopoly, not to be lightly parted with. The consumption of American pine in this country is enormous, and serves to impart a most valuable impetus to the commerce of the British American colonies and the United States. The *lumber trade*, as it is called, is a vastly important one; and the *lumberers*, or woodmen by whom the trees are felled, hewn into form, launched on the rivers and sped on their way to the port of shipment, are just as peculiar in their habits and customs as soldiers, sailors, or railway navvies. Bands of them are assembled in the autumn months, and regular expeditions organized. Oxen, horses, axes, provisions, and, in fact, every requisite for the coming campaign, is provided, and transported up the larger streams, either in canoes or boats. Fodder for the cattle is collected on the way, being purchased from such settlers as may have it to dispose of. On the chosen locality being reached, the band, under a selected leader, proceed at once to hut themselves, and erect a cooking shanty and sheds for the cattle. Bark, poles, and fir-branches are made available for constructing these rude dwellings and the stores for their necessaries.

Three separate labour-parties, or gangs, are usually organized. One, with the dexterity only possessed by backwoodsmen, fell the trees, sending the white chips flying, and bringing the growth of ages crashing to the earth:—

> "Sharply sounds the ringing axe
> Far through forest glade and fell;
> Sadly tolls the wood-king's doom—
> Forest monarch's passing bell."

Others lop off the branches and hew the logs into

form for transport; whilst a third party, with the assistance of the teams, draw them to the nearest river or stream, where they remain until the break-up of the ice in the spring. This usually takes place about the month of April. The huge logs are now thrust forth into the current, and kept moving onward by re-launching them when stranded. Each tributary rivulet serves to contribute its quota of floating tree-trunks to the mighty rivers flowing onwards to the sea. Down these, vast rafts are conducted by the hardy crews who know full well how to manage them; men whose home is in the wild pine woods, and to whom the rushing rapid, the giddy whirlpool, and the drift-laden flood are as high roads and turnpikes. The port of shipment being reached, the labours of the lumber-man are ended, and his hard-earned wages due. These, like a sailor's prize-money, are too often scattered heedlessly, when an empty pocket and the opening lumber season send him back to the wilderness again. There are numbers of the cone-bearing family which, although beautiful and most interesting, can by us, during this ramble at least, be but the subjects of a passing glance. Pincasters, Spruces, White and Black Hemlocks, and Balsam Pines, from which the far-famed Canada balsam is procured,—all these shall we pass on our journey. We cannot stay to taste the spruce beer, see the young twigs boiled and fermented with maple sugar, watch the Indians stitch their bark canoes with the tough roots, linger over turpentine, or prepare pitch; we are only wayfarers among the trees, so must travel onwards, and see what is noteworthy about Cedars. Those of Lebanon have frequent notice in the Bible, and high value appears to have been set on them by the ancients. Both Pliny and Vitruvius speak of the use of cedar resin in the treatment of papyrus and the embalming of Egyptian mummies. Diodorus Siculus informs us that Sesostris the Great, king of Egypt, built a vessel of cedar, 280 cubits long, which was covered with gold both within and without. The largest cedar mentioned in ancient history is that which was used to make a galley from for King Demetrius, which was propelled by eleven ranks of oars. Its length was 130 feet, and its thickness 18 feet. The question has been raised as to whether it might not have been an evergreen cypress, but the Cedar appears to have been too well known to admit of the error. Amongst other freaks of a luxurious fancy, we find that the Emperor Caligula had constructed from cedar-wood certain magnificent vessels, which he called Liburnian ships. The poops of these were decorated and enriched with gems and precious stones, the sails were of different colours, and the interiors were most sumptuously fitted up with baths and banquet-rooms, in which were splendid paintings and carved work. One of the first writers of travels who gives any description of Mount Lebanon and its cedars is Belon, who visited Syria about the year 1550.

Thus he writes:—"About sixteen miles from Tripoli, a city in Syria, at a considerable height up the mountain, the traveller arrives at the monastery of the Virgin Mary, which is situated in a valley. Thence, proceeding four miles further up the mountain, he will arrive at the Cedars; the Maronites, or the monks, acting as guides. The Cedars stand in a valley and not at the top of the mountain, and they are supposed to be twenty-eight in number, though it is difficult to count them, they being distant from each other a few paces. These the Archbishop of Damascus has endeavoured to prove to be the same that Solomon planted with his own hands in the quincunx manner as they now stand. No other tree grows in the valley in which they are situated, and it is generally so covered with snow as to be only accessible in the summer."

In Solomon's day Mount Lebanon must have possessed immense forests of cedar, for when he rebuilt the temple of Jerusalem, we find that he obtained permission from Hiram, king of Tyre, to cut down the Cedar and Fir necessary from Mount Lebanon, and that for this purpose he sent four score thousand hewers to cut down the trees. We also read that there was a palace built by Solomon, which was called the House of the Forest of Lebanon, from the great quantity of cedar used in its construction. He is said to have paid to Hiram twenty thousand measures of wheat and twenty measures of pure oil annually while the work was in progress, and when it was completed he ceded to him twenty villages in Galilee. Churchill thus writes of the *Pride of Lebanon*:—

> "The cedar, whose top motes the highest cloud,
> Whilst his old father Lebanon grows proud
> Of such a child, and his vast body laid
> Out many a mile, enjoys the filial shade."

There appears some doubt as to the exact period at which the Cedar was first introduced into this country, and also to whom the honour of first producing the plant from seed is due. Lord Holland writes his opinion that it was first introduced by his ancestor, Sir Stephen Fox; but the weight of evidence collected from old records and MSS. is decidedly in favour of Evelyn being the first who raised young cedar plants from cone-seed in England. He says, in his curious work on trees, that "the Cedar is a beautiful and stately tree, clad in perpetual verdure; that it grows, even where the snow lies, as I am told, almost half the year; for so it does on the mountains of Libanus, *from whence I have received cones and seed* of those few remaining trees. Why then should it not thrive in old England? I know not, save for want of industry and trial." That he succeeded in raising his young plants, the following extract from a letter written by him to the Royal Society, dated Sayes Court, Deptford, April 16, 1684, will go far to prove. "As to exotics," writes he (referring to the severe winter which had just passed), "*my cedars I think are dead.*" It is highly probable that they did not die, and that the celebrated Enfield cedar came from him about that time as a seedling. The Cedar was not introduced in France until the year 1734, when Bernard de Jussieu, who had been visiting friends in England, took two young plants home with him safely curled up in his hat. One of these

was planted on the mound in the Jardin des Plantes in Paris, and the other was for many years entirely lost sight of, until M. Mérat discovered it growing in the grounds of the Château de Montigny, near Montereau, a small town about eighteen leagues from Paris.

"High on a hill a goodly cedar grew
Of wondrous length and straight proportion,
That far abroad her dainty odours threw,
'Mongst all the daughters of proud Lebanon."

The Deodara is another exotic cedar of great grace and beauty. We are indebted to the high mountain-ranges of India and Cashmere for this elegant addition to our parks and pleasure-grounds. Its name is derived from the Hindoostanee word *Devadara*, or tree of the gods. The wood is strong and durable. Many very ancient temples which have fallen into ruin, have beams and supports of deodara timber in them but little changed by time. In certain districts the resinous splinters of deodara are used as torches, and carried at night by those who travel amongst the precipices and jungles. For another highly ornamental and, thanks to acclimatization, familiar member of the Coniferæ, the *Araucaria imbricata*, we owe our gratitude to the explorers of the Andes. To the Araucan Indians its pine-nuts yield a wholesome and substantial food; whilst its resinous exudations are extensively used by them, both externally and internally, as medicinal agents. The timber is also very valuable for many important purposes. The trivial name "Puzzle Monkey," sometimes given to this tree, is derived from the numerous needle-pointed scales which cover the stalk and branches, offering such a serious impediment to the climbings and frolics of those lively animals.

Returning for a brief glance amongst the cedar woods and their pleasant shades, the White Cedar (*Thuja occidentalis*) stands before us beautiful as she is useful. Her comely daughters, although tall, stout, and stately as any family of daughters (even of the forest) need to be, sink into pigmy proportions, and become veritable *Minnie Warrens*, when compared with their colossal cousins the *Mammoth trees* of California. These woodland giantesses were discovered in the year 1850, by a Mr. W. Whitehead, in a comparatively small locality about ninety-seven miles from Sacramento City. Here, within little more than fifty acres, stand 103 such trees as the whole known world cannot equal. Twenty of these average seventy-five feet in circumference.

Some few years since, a huge member of this family, known as the "Big Tree," was felled, not by the axe or saw, but by boring a complete circle of auger-holes round and into its enormous mass. Twenty-two days were occupied by five men in completing its overthrow, by the introduction of numerous wedges, when the computed growth of three thousand years came thundering and crushing to the earth. This vegetable Goliah measured 302 feet high, and 96 feet in circumference at its base, and the bark measured nearly a foot in thickness. A double bowling alley has been established on the fallen trunk; and on the stump, which stands five feet six inches from the ground, thirty-two persons danced four sets of cotillons without being in the slightest degree incommoded for space; sufficient room being left for musicians and a fair number of spectators. This curious and unique ball-room, when planed smooth, was found perfectly sound wood, and measures about 92 feet in circumference. The *Mother of the Forest* is the largest now left standing. In 1854 the bark was removed to the height of 96 feet from the ground for exhibition. It measures at the base 84 feet, twenty feet from the ground 69 feet. Its height is 321 feet, and the first branch is thrown off at 137 feet from the earth. Calculation gives the quantity of timber it contains as 437,000 feet of sound inch lumber.

The *Father of the Forest*, who lays prostrate and half-buried in the earth, must have been of even more huge growth than his venerable spouse. His height is computed to have been 435 feet, circumference at base 110 feet, 200 feet to the first branch, and at 300 feet from its root, where it broke in falling, it measures 54 feet round. A number of fanciful names, such as *the Old Maid*, *the Old Bachelor*, *the Three Graces*, &c. &c., have been given by travellers to individuals and groups of these curious and interesting trees, which stand in towering and venerable majesty, like vast monoliths or obelisks reared in commemoration of the past ages of the mammoth and the mastodon.

There are certain primeval forests of pines in the neighbourhood of Astoria, which for the magnificent trees they contain are scarcely to be surpassed. The work of clearing them away for the prosecution of agricultural pursuits would almost appear a labour of ages, so closely do these huge vegetable towers stand to each other. The soil on which these forests grow is extremely fertile. Yet with all the rich supply of natural mould stored up below, it is difficult to conceive how the assimilative powers of the trees could, even through the ages of their existence, heap up and garner the elements requisite to build them up to their present stature; and we are led, on beholding these wonders of Nature's producing, to reflect on the races, dynasties, and nations which have passed away during the growth of these grand old forests. Even the very species of bird or animal by whom the tiny cone seed from which they sprang was perchance deposited beneath the fallen leaves, may, like the Dodo, or the Dinornis, have passed away and become extinct and forgotten, save by the investigator of the earth's secrets.

Unlike the *Sambertiana*, or Rocky Mountain Pine, which bears cones of twelve and even sixteen inches in length, and nearly a foot round, the *Sequoia gigantea*, or mammoth tree of California, which we have described, yields a remarkably small fruit, even much less than that of many cone-bearing trees of this country, still not the less welcome to our bunch of cones, which having roughly gathered on our way, we present as an offering to our reader and companion, hoping that this is not the last ramble we may take together in search of Nature's treasures.

ON SKETCHING FROM NATURE.

By Aaron Penley, Professor of Landscape Painting at the Royal Military Academy, Woolwich.

No. VII. CRUMMOCK WATER, CUMBERLAND.

THE first washes only are given in the present subject, that the pupil may be more easily initiated in the manner in which a water-colour drawing of this description is commenced.

The character of the finished work will always depend upon the under-tints, so that it is necessary to have them of a kind most favourable for the after-tones. I am not without hope that the example given, may serve to show clearly what the appearance of the first stages of a drawing should be, and how it is to be obtained. As in all the previous subjects in this Magazine, the pencil outline has been dwelt upon as the greatest help in producing a satisfactory result; so in the present illustration there must be the most careful attention in placing each individual formation in its right position; and not only in this, but in drawing it with freedom as well as accuracy.

One thing I invariably find the pupil not to pay sufficient regard to (although it may almost appear to many too trifling to notice), is the manner in which the pencil is cut. But there is more in this than most persons suppose. Without a true point, it is impossible to judge correctly of the line to be produced. The wood should be much cut away in a slanting direction, to permit of the eye resting upon the point without interference. Neglect of this is frequently a cause of failure, and it is not an uncommon occurrence that a careless outline carries with it a corresponding manner throughout the colouring. It is to be hoped this caution may not pass unheeded, it being borne in mind that a *clear* line *directs* and a *blurred* line *confuses*, causing much hesitation in laying on the first (and generally large) washes of colour.

The Lake scene under treatment has been selected from its singleness of character, that is, from the masses being large, and their detailed formations easily seen. These have been drawn in with the black-lead pencil to secure the proper forms and position of the several shadows. All deviations from an even surface of ground should invariably be marked, as they serve to denote a variety of flowing, and (at times), continuous lines, and add greatly to the interest of the work. If the tree and foreground be equally regarded, the places for the different tints will be found with ease.

The outline being correct, pass some water over the whole with a large flat brush, and while still damp, lay on a light wash of neutral orange (A. Penley's), or yellow ochre and brown madder, over the drawing, to impart a warm tint. This will also fix the pencilling and prevent its rubbing. When dry, again wash with water, and as soon as the wet disappears, begin the upper portion of the sky with a tint of pure cobalt, carefully leaving the light clouds. Continue the wash by adding a little light red to produce a grey tone for the clouds, and deepen toward the lower edges with more cobalt. This operation should be effected at once; nevertheless, if it be too light, the tones may be subsequently strengthened. A tint of light red, yellow ochre, and cobalt, is to be mixed as nearly as possible to the colour of the warm portion of the mountain, and also a mixture of cobalt with a little indigo for the blue portion.

Commence at the top, with the brush tolerably well filled, carefully preserving the outline, bringing the colour from it into the body of the mountain; then, on nearing the bluer portion, add the mixture of cobalt and indigo, until the whole of the mountains are covered; softening the colour down to the lower edge and *over* the warm tint for the low land and trees. This same blue tint is to be passed over the water, leaving the broad lights. The foreground stones of grey tints are now to be put in with cobalt and light red, varying the proportions to the character of tone required. After this, gamboge, light red and cobalt, more or less of one than of the others, are to be employed for the herbage.

A very light tint of the first mixture with more cobalt added is now to be passed over the greyer parts of the warm colour, and the blue must be deepened with the cobalt and indigo. It will be seen that there is a warm tone on the dark mountains. This should have resulted from the blending of the first tints, by one running into the other while wet; but if the warmth is not sufficient, the first tint may be slightly passed over it again. The line of trees on the low land must now be washed in with yellow ochre, light red, and a little cobalt; also the rocky projection at the right. The shadows of the stem of the tree are of cobalt and light red, and when dry are to be deepened, use the same, only with more of light red: this tint is also to be employed for the dark stones. Gamboge and a little brown pink will give the colour for the foliage; after this, wash a tint of yellow ochre and light red for the colour of the stem, and when dry, introduce the shadows and markings on the dark mountains with the cobalt and indigo, and then another wash of the same (more cobalt) on the second tints of the water.

It is recommended to do this drawing twice over, with a view of gaining manipulative dexterity; and having done so, to lay aside the copy and endeavour to reproduce it from *memory*. This is by far the best way to obtain a practical knowledge of colour, as it will enable the amateur to apply it to his own sketches.

I take advantage of this opportunity to write a few words respecting artists' colourmen of the

present day, and I do so not only for the information of my readers, but also because it affords me a sincere pleasure to speak of them in the highest terms. It is to them that the water-colour painter is indebted for the means of carrying out his most elaborate works, as well as his slighter sketches. Indeed, there is neither hindrance nor imperfection in the material offered to him, whereby he is prevented from giving every effect of which colour is capable, whether in its extreme softness and delicacy, its richness of colour, both pure and broken, or its transparent brilliancy and depth of intensity. To Messrs. Winsor & Newton, of Rathbone Place; Mr. Newman, Soho Square; Messrs. Rowney, Rathbone Place and Oxford Street; Mr. Roberson, Long Acre; and Messrs. Reeves & Son, Cheapside, I offer many thanks for the perfection and purity of their colours, both in the moist and dry states. For permanency, for firmness of texture, evenness of flowing in flat washes, freedom from deposit, or any gelatinous and slimy nature, readiness for use, perfection in numberless combinations, and freshness of tone, it is impossible to wish for any improvement. They have, without doubt, reached the highest degree of excellence to which they can be brought.

However vivid the power of imagination, however intricate or simple may be the subject to be worked out, the water-colours from the above-named houses will be found equal to the task, and will justify the remarks made upon them, as they are in every way calculated to satisfy the wishes and requirements of all—even the most fastidious.

The colours most adapted for the amateur are,—

Chinese white, in bottle or tube.	Rose madder.
Gamboge.	Crimson lake.
* Naples yellow.	Brown madder.
Indian yellow.	Van brown.
Raw sienna.	Brown pink.
* Cadmium.	* Indian red.
* Neutral orange. †	Cobalt.
Light red.	French blue.
Burnt sienna.	Indigo.
* Vermillion.	Sepia.
	* Oxide of chromium.

Those with a * to be half-cakes, or pans.

There are other colours of much use to an artist whose works go far beyond those of an amateur.

† Messrs. Winsor & Newton make this colour.

THE PARIS EXHIBITION, 1867.

THE works on the Champ de Mars have been pushed on with remarkable energy and regularity; the whole of the industrial galleries, or courts, were ready to receive their fittings in the course of December, the roofs glazed, the iron-work painted, and the floors all laid by the end of the year that has just departed.

The plan adopted with respect to the flooring strikes us as somewhat singular. The whole of the passages left for the circulation of the public, those which lie in concentric circles and divide the various groups of the Exhibition, as well as those which radiate at right angles to the former, and supply direct communication between the outer wall of the building to the central garden, are laid in cement, while the Industrial Courts are boarded. Again, the Fine Art Courts have cement floors, while those adjoining, in which the collection of retrospective art is to be placed, are floored with oak parquet.

Cement floors have certainly an advantage with respect to noise and dust, they conduct sound badly and having no spring the dust is not thrown upwards as it is constantly by an ordinary floor; but this latter advantage will probably be neutralized by the constant movement of feet, and especially by ladies' dresses; and it is very fatiguing to stand long on a cement floor. This will doubtless be remedied in the Picture Galleries by matting or carpet, but the same cannot be the case in the avenues of the Industrial Courts, which are pierced at short intervals throughout their whole course by gratings communicating with the great ventilating shafts beneath them. It is a source of congratulation that the report relative to the use of asphalte within the building turns out to have been unfounded, or, at any rate, that no asphaltic floors appear, for in hot weather the effect of these is most fatiguing and disagreeable.

The variety of flooring adopted in the Exhibition will offer valuable means of comparison and hints for the construction of museums and galleries in general, and it is probably with this view that the Imperial commission has made use of four different kinds; namely, common wood, oak, and cement of two kinds, one being what is called *béton aggloméré*, a kind of concrete trodden or beaten down, which is largely used in Paris. The concentric avenues, as well as the vaultings of the ventilating passages beneath are of the latter composition, while the radial avenues are laid in cement. A small house for the Imperial Commission is now being built entirely of this *béton*, in the grounds.

The building will supply many valuable lessons, and, amongst others, in the modes of lighting and in the tempering of the light. The arrangement of the windows is different in each portion of the structure—clerestories in the great Machinery Court and in the principal avenue; lights in the central portion of the roofs, in the Fine Art and Retrospective galleries, and in the lower or outer parts of the roof, in the Industrial Courts. With regard to the graduation or tempering of the light, opaque screens are hung from the tie-rods of the roof of the Picture Galleries, so as to place the spectator in the shade while the light falls on the works on

the walls; while in the Industrial Courts *velta*, or awnings of a thin white material, are being placed here and there, by way of experiment, over the avenues of circulation. It is worthy of remark that the stuff of these awnings is rendered fireproof by a chemical process. Looking at what has happened at the Crystal Palace, it seems almost a crime that any building erected to contain works of art, or any other valuables that cannot be replaced, should be constructed otherwise than fireproof. The Fine Art Galleries of the Paris Exhibition are very satisfactory in this respect; the walls are of solid stone, and the floor, as already stated, of cement, so that a fire is almost impossible.

This consideration of security naturally leads to the modes of closing the Exhibition at night, when the grounds, cafés, restaurants, and other establishments will be blazing with light, and, at times, thousands of people enjoying themselves there. There are sixteen outer doors to the building; and those of the minor entrances are now being fitted with strong iron shutters moved by machinery, like those adopted for shops; there is no doubt that the main entrances will be secured in an equally efficient manner, so that the outer iron wall of the building will be virtually complete. Another precaution is taken with regard to the Retrospective Galleries, each opening of which is being supplied with solid oak doors running on iron rods and provided with strong locks. This must be rather with a view to protect the valuable contents of these galleries from peculation than from fire, for the walls are all of stone and the floor of oak, and the precaution is a wise one.

The colouring of the various parts of the building is proceeding; the inner side of the iron roof and sides of the great Machinery Court, as well as of the principal vestibule and avenue, are being painted of a light chocolate or *café au lait* colour, and the main lines, mouldings, and projections picked out and relieved with chocolate, vermillion, and white, but the effect is not striking. Something of the same kind has been tried on the outside of the building, but has not been proceeded with. The ironwork of the Industrial Courts is now being painted of a dull apple-green, but, with the exception of the avenues, there will be scarcely any of it visible when the fittings are all up. This remark does not, however, apply to the British Department, which will be much less enclosed and boxed up. The walls of the Picture Galleries are painted of a dull Pompeian red, with a broad frieze of a geometric pattern in *grisaille*. The *marquise* around the inner garden has blue-grey pillars, mounted on bold cream-coloured stone plinths, the lines of the columns being relieved with bright chocolate, in harmony with the roof; but the final touch is not yet put to this verandah, which will have a good effect when the enclosed garden is planted.

Quitting the central garden, let us take a glance at the actual condition of the preparations in the three zones of the Fine Arts, Industry, and Machinery.

The first, and inner one, will be filled last, and will be ready in ample time. The greater portion of the rooms on the French side—for in this part of the Exhibition the galleries are broken up into *salons*, in order to afford more wall space—are finished or nearly so; the walls of the rest are being lined with wood, which will afterwards be covered with paper, and finally coloured. The sunshades are also mostly in their places. The admission jury has had great trouble, the space being only equal to about one-tenth of the applications; but the first selection, that of known works not requiring previous examination, has at length been made, though the result is not yet published. The mode said to have been adopted for increasing the hanging space, is the erection of screens in various parts for the smaller pictures; there is one difficulty, however, with regard to such a plan, the centre of the rooms having been thrown into shade by the screens referred to above. There is little doubt, however, that room will be found for all the pictures that the management is very desirous of seeing exhibited, and that our ingenious neighbours will see that their treasures are sufficiently illuminated.

The difficulties which surround the arrangements of the Fine Art department have not been enhanced by the slightest complaint respecting the composition of the juries; the Imperial Commission, as the readers of NATURE AND ART know, left to the artists themselves, or rather to such of them as had received first-class medals, to appoint two-thirds of their judges; the result has been admirable, the juries consist of the *élite* of the body. This principle of art suffrage, applied previously to the annual exhibitions in Paris, has thus received the seal of one of the most trying applications that could possibly have been made of it, and must be regarded by all unprejudiced persons as established almost beyond question. Knowing how completely unsuccessful was the old system of official and academic nomination, we trust that it will be gradually banished from all art competitions of a general nature. It is not a small matter to relieve the world of art from all feeling, or even suspicion, of partiality or nepotism; a feeling which is a prolific source of coteries and consequently of cabals.

The great central zone, or rather series of zones, devoted to industrial products of all kinds—from a block of coal, to a chronometer—perhaps one of the most perfect examples of skill and science combined—is in a more advanced state than that of its mechanical brother beyond, or than those of its artistic sisters of the inner ring. In the French department nearly all the courts are formed, and several of them are nearly ready for the decorator; the cases in which the gold and silver smith and two or three other classes of exhibitors will show the products of their cunning arts are in their places, and only require glazing and painting; those which are in this forward condition exhibit careful arrangement, and there is no doubt that our neighbours will be still more remarkable than ever, on the present occasion, for the symmetry of their installations as well as for the beauty of their

products. In some cases the effect of these courts will be rendered more complete by the introduction of oak parquetted floors in the avenues and spaces not covered by the cases. Everybody who visited the Exhibition of 1862 will remember the admirable effect of the tiled and mosaic floors laid down within the courts of some of our great porcelain and pottery manufacturers.

The portions of this section of the building devoted to the Foreign commissions, also mostly exhibit great activity; much of the woodwork of the Belgian, Russian, Swedish, Danish, Turkish, Egyptian, Italian, Chinese, and Japanese courts being almost completed, and in some, the Egyptian for example, heavy articles of exhibition which have to be built up, are being proceeded with.

In general, in order to obtain as much wall space as possible, there are too many high partitions, and, consequently, in those parts there will be little perspective and effects of *coup d'œil*; but some of the commissions, and that of Russia in particular, have avoided too much enclosure. The Russian department will be remarkable for its openness and, consequently, unobstructed view and light; it stands at the side of one of the great radial avenues, and its limit is marked by a bold and highly effective ornamental wooden railing, cut by hand in the peculiar style of the country, the bases of the plain iron columns of the building being enclosed in massive woodwork corresponding with the railing, and mounted on octagonal stone plinths; but the most characteristic constructions belonging to Russia are in the *parc*, to which we shall presently proceed.

The last department at which we arrive in making the circuit of the building, commencing with France, is that of Great Britain, and that at present is an empty space. We know that English workmen do not allow the grass to grow under their feet when they do begin, but we trust that all our preparations are so well considered, that commencing last we may be ready first; and, as the space devoted to the United Kingdom is the largest by far, next to France, we shall be pleased to find it not too much subdivided, and, consequently, presenting a more imposing whole than its neighbours, and at the same time presenting a little more general design than has usually been apparent in our exhibitions; the jewel is certainly the main attraction, but the setting can never be carelessly arranged without derogating from the effect of the work. The sappers are marking out the floor, on which may now be read the names of many well-known firms.

Leaving the Industrial Galleries for the great outer Machinery and Process Court, we find evidence of the hand of the British Commission, a portion of the exterior Alimentary Gallery having been taken into the Machinery Court by means of a wall beyond the circumference of the latter: by this arrangement considerable space will be added to the Mechanical department at the expense of the Alimentary Gallery, which we presume does not require it. The wall will be covered by the erections without, so that the general effect when all is finished will be in no way interfered with by the arrangement.

The general preparations of the immense Machinery and Process Gallery, including an amount of work which it shows great courage to have undertaken in so short a space of time as was allowed for it, are almost completed. Along the whole of the central line of this court, which, be it remembered, is nearly five thousand feet in circumference, have been set up two rows of cast-iron pillars, not very wide apart, and connected above transversely as well as longitudinally with lattice girders; at the sides, a little below the upper surface of the girders, are large iron brackets, intended to support the driving shafts and pulleys for the machinery in motion: and on the top of the girders will be a gallery, more than ten feet wide, for the convenience of visitors, who will thus be enabled to make the tour of this important portion of the Exhibition, and view the machinery and more prominent processes very advantageously. This gallery was a happy thought, for, as the public must otherwise have been excluded from this central portion on account of the driving machinery, it will make a very large addition to the means of circulation. There will also be a passage below between the columns of the gallery.

In some parts of the Machine Court, solid foundations are being constructed for engines and other heavy objects, but not very much has yet been done in that way, and a vast amount of work remains to be accomplished. The future progress in this part of the Exhibition will be greatly aided by the auxiliary measures adopted by the Imperial Commission; a temporary railway is being laid down around the building and a similar line of rails is being placed just within the Machine Court itself, and which will also be carried all round: these two railways will be connected by means of small branch lines at right angles to them and of which the turn-tables are being fixed. Pieces of machinery, goods, and materials arriving by rail at the station just outside of the *parc*, will thus be carried directly into the building to the very spot where they may be required. The time that will be saved and the interruptions that will be avoided by this arrangement are most important considerations; the scenes that occur in other parts of the grounds at present, where it takes three or four horses to pull a one-horse cart out of mud-holes, will thus be happily avoided.

Without the building the new feature of the Alimentary Court with its mile of covered terrace, or boulevard, is beginning to assume its intended appearance. The whole of the fronts of the French refreshment establishments are in place and ready for the painter and glazier; they form two immense ranges, and are in all, about eight hundred feet long, and thirty-two feet broad. They include a *grand café*; a restaurant on the same large scale; a *Dîner de l'Europe*, that is to say, not exactly a *table d'hôte*, but a dinner, of which the bill of fare and the price are fixed, but which is served at any moment; a *Buffet de l'Univers*, which, if as well

organized as some of those at French railway stations, will be an estimable boon to those whose time is precious, and who have some respect both for their purses and stomachs; and, lastly, a Strasbourg beer-house. The counters for the managers of these establishments are now being set up, and, before this comes under the public eye, some of the establishments will be in operation for the convenience of those whose fate compels them to spend much of their time within the yet inhospitable building and its *pleasure* grounds, where Boreas, Aquarius, and Jack Frost at present revel and reign alternately, and use weak mortals most unceremoniously. On the English side there is no silver gridiron yet, nor any corner even for a snack or a draught, but there is a promise of something to come, in the form of a strip of white calico on which appears the word *Buffet*, in conjunction with the names of Spiers & Pond, and Bass & Co.; the space thus marked is not so extensive as those covered by the French establishments, but its frontage is not much less than a hundred feet in length. But this is only one of three or four British places of refreshment to be provided. The Russian and the Swiss *restaurants* are also being built.

Out of doors the work is naturally not so much advanced as it is within the building, and it is extremely fortunate that the walls of the most important buildings are nearly all completed, for the sharp frost which has set in renders mortar and cement very intractable servants as well as inefficient. Of all the novelties to be found in the gardens of the Exhibition, the aquariums will be amongst the most remarkable, and particularly that to be devoted to "herrings and other salt fish," as a comic French writer once described the denizens of the ocean. The tanks in which they are to be exhibited are constructed entirely of iron and glass. A large artificial cave was first formed by throwing up a *talus* all round the spot; the sides of this cave were then lined with rockwork, and a number of pillars of the same placed at intervals on the floor. Over all this was laid a roof composed of iron and glass, leaving two openings through which flights of steps lead to the cave, and a central space for the visitors. The aquariums are placed all round, and on the glass roof of this central area. There are also terraces near the upper level of the tanks, while at the two ends the roof of the cave forms, are platforms of considerable size; it will be seen that by this arrangement visitors will be able to watch the movements of the fish from almost every position, above, beneath, and around. The large contents of this aquarium rendered the supply of sea water a matter of serious consideration, and therefore a system of aërating it has been adopted; the water of the aquarium will run over and form a cascade, it will then be received in a well and pumped back into the aquarium, and by this means it is hoped that the creatures will be maintained in good condition without a very large supply of fresh sea water.

The arrangements for the exhibition of fresh water fish and reptiles are of a totally different nature; in this case the building is of stone, the whole of both sides being divided into compartments which will be glazed only in front, like those in the Jardin d'Acclimatation in the Bois de Boulogne. This aquarium is connected with a lake, and from the latter starts a small canal which pursues a tortuous course through the grounds passing secretly beneath the roads and pathways, crossing and enlivening the plantations and flower-beds by the flow and sparkle of its silvery stream, till it reaches the great lake at the other extremity of the *parc*.

At the further end of this lake is a large mass of artificial rock, over which a cascade will fall, and upon it stands an iron lighthouse of considerable height: this is for the exhibition of the electric light and it is now ready to receive its lantern. Another lighthouse erected in the grounds at no great distance from the former will allow of a comparison being made between the old dioptric and the new electric system.

The small model church, which stands in this quarter of the grounds, is finished exteriorly, and presents a very pretty object: complaints have been made that it exhibits no style, or rather a mixture of all styles, but this is an unfair charge, as the mixture of style is one of its objects; there are semicircular, Early Pointed, and other shaped windows, brackets, niches, and colonnettes belonging to various periods, and the same is the case inside as well as out; but then it must be remembered that the object is to show ecclesiastical construction, decoration, fittings, and furniture of all styles, though in normal positions. In spite of the mixture, the architect has produced a pleasing general effect,—that is to say, as regards the exterior, for the interior is not yet in a condition for criticism—the principal thing to be complained of being, that the most ornamental face of the building is so near the lake that there is some little danger of taking an unintentional bath while studying architecture. There is no doubt that this model church will be one of the most attractive objects in the grounds.

On one side of the main avenue leading to the chief entrance of the building, and opposite the Oriental Pavilion of the Emperor of the French, a solid rectangular building, with pointed gables, which, in the language of the place, is the *Pavillon de la Reine d'Angleterre*, is rapidly approaching completion. This royal lodge consists of one large apartment in the rear, with two smaller ones at right angles to the former in the front, and presents one of the most positive contrasts imaginable to the Byzantine structure opposite to it. They are neither of them yet far enough advanced to describe more particularly, except that one structure consists entirely of right angles, while the outline of the other has scarcely an angle in it, and while one is of wood, to be highly decorated, the other is of solid stone, relieved by red bricks, and covered by three decorated timber roofs. Near the English Pavilion stands the chimney-shaft and the foundation of the boiler-house—a very large one, to be fitted with the patent conical tube boilers of Messrs.

Galloway & Son, of Manchester, for the supply of steam to the engines which are to drive the machinery in the British department. This will be the largest boiler-house in the grounds ; and the design for it is derived from a Mohammedan temple. The Emperor of the French sets up his standard over a Turkish Kiosk, and Great Britain places her steam boilers in the mosque of Syeed Oosman ! What is the mixture of half-a-dozen styles in a model church after this ?

Not far from these Imperial tents, over which the standards of France and England will float as bravely as did those of Francis and Henry on the Field of the Cloth of Gold four centuries ago, stands a building, presenting a further contrast ; it is an odd-looking structure, and is to be occupied as a Swiss refreshment-room, the attendants to be dressed in their national costume. The Swedish Commission will have a smaller establishment in their quarter of the park.

This portion of the ground is crowded with buildings ; there are three photographic establishments all of considerable extent, and one very large ; the International Club-house will be ready in a few weeks to receive its subscribers ; and the theatre, after two reverses of fortune—theatres are well accustomed, however, to ups and downs,—has its outer walls nearly completed.

The buildings of the Egyptian and Tunisian Commissions make a great feature in the grounds ; the former have already been described in NATURE AND ART, and the latter must wait another opportunity. Russia has conceived a happy idea and is carrying it out on a grand scale and with remarkable skill ; three buildings are being erected in a group, two of these are dwelling-houses, and the third and the largest a model stable, all constructed of round timber, prepared in Russia, and put together like a puzzle by Russian workmen, who themselves are picturesque objects, with their red guernseys, woolly waistcoats, showing the lower part of a shirt or tunic of striped stuff beneath, knickerbockers, and round fur caps. The structures, besides exhibiting the style which has been used for centuries down to the present time, show the peculiar arrangement of Russian dwellings and establishments. The ground-floor of the house is devoted to the housing of cattle during the winter months, the door is just large enough to admit the beasts, the windows are small and square, and the apartment low, having more the appearance of a cabin in the stern of a ship, with three lights at one end, than anything else ; the room above the cattle layer is the general living-room of the peasant farmer and his family. In one part of the latter will be erected a great stove to illustrate the Russian mode of heating their houses, and in another will be the *rousse* corner, the little chapel, or place of the household gods. The stable is a building two hundred and fifty feet long, and about twenty-four feet wide, and will contain ten horses, types of the various breeds of Russia, and fourteen choice animals of different origin. The arrangement of the stalls, so that the animals may show their sides, instead of their tails, to the public, those for ventilation and for the complete surveillance of the whole of the stable by the men who sleep, like the *palefreniers* of the great Paris omnibus establishments, in niches six or eight feet from the ground, will be examined with great interest by English visitors. The decoration of the buildings is also interesting, the false roof of the stable and other parts are carved and pierced in the peculiar semi-oriental style in vogue in Russia, and the gables of the houses are decorated in like manner. The method of construction, for which the axe alone is used, and the system of corking and stopping the seams, deserve the serious attention of colonists and emigrants. The exhibition of the malachite products of the Imperial factories gave great interest to the Russian department in the Exhibition of 1851 ; but the admirable illustrations to which we have referred of the buildings and habits of the Russian people should, and doubtless will, attract at least as much attention.

The Swedish Commission is also erecting similar model buildings illustrative of the architecture, mode of construction and habits of the country, in times past as well as in the present day, including a complete reproduction of the house occupied by Gustavus Vasa, at Ornacs, in Dalcarlia, with all the furniture, some of which is authentic. But the Swedish portion of the *parc* will demand further notice, at a future period, when the works are more advanced. A small steamer, model of those used on the Swedish lakes, brought to Havre by the frigate *Orœdd*, is now on its way up the Seine to Paris. But it is dangerous to touch on what is expected, while every day brings some new object of interest bodily before the visitor to the Champ de Mars.

Before quitting the limits of the Exhibition, it is but fair to say a few words on the admirable arrangements made by the Imperial Commission for the convenience of visitors, whether they arrive by road, rail, or river. First, for those who arrive in carriages, a long covered way is now being constructed at the outer edge of one side of the park, beneath which half a dozen vehicles may set down their occupants at the same moment, and from this three other passages lead to side doors of the building ; those who arrive by rail will simply have to cross a road, over which a roof is to be thrown, and make their way into the building by means of a long *promenoir*, or covered passage for pedestrians, which skirts the grounds and ends in a large vestibule at one of the principal side entrances of the building ; lastly, for those who are borne on the bosom of the flowing Seine, a spacious landing-place is being constructed, from which visitors may either ascend to the quay and there enter Exhibition Park by the front gate, or they may pass directly into the grounds by a gate beneath the pretty steel bridge lately thrown across the quay.*

* On the quay, or rather over the strip of land at the side of the river, two very large buildings have been erected : these are to be used as restaurants, and one of them, it is said, is to be managed by English caterers.

UXOR ET LIBERI IOHANNIS HOLBENII.
CIVIS BASILIENSIS PICTORIS EXIMII.

Ad Tabulam Ioh: Holbenii in Biblioth: publ: Basil: adservatam.

H. Holbein invt. — B. Hübner fecit. 1780

Basileæ apud Chr. a Mechel Chalcogr.

Hans holbein d: maler
IOHANNES HOLBEIN
Civis Basiliensis immortale
Natus Anno Domini 1498.
I.F.PICTOR CELEBER
Patriæ Britanniæque Decus
Denatus Londini Anno 1554.

HOLBEIN IN GERMANY.*

By H. Ward.

PART IV. BASLE—*concluded.*

On the 23rd of September, 1520, Holbein was formally admitted into the Guild of his craft, which was distinguished by the name of *Heaven*, being called "Zum Himmel." He painted his own shield for the hall, where it is still preserved. It is yellow, bearing a black bull's head, surmounted by a red star; and over it is the inscription, *Hans Holbein the painter* ("der Maller"). He was a hearty young fellow, as we can see by Mechel's engraving of his self-portrait. The drawing which he made for it has been photographed, and it has a more spiritual expression. His brain was teeming with beautiful and lively fancies; and if his tongue was only a tithe as ready as his hand, he must have been a famous Guild-brother. He was evidently welcome to the other members of his Guild, whether saddlers, barbers, or painters; for even before his formal admission he was chosen (25th June) as one of the two house-stewards for the year. His colleague was a saddler, and their successors were another saddler and a painter named Johann Herbster. The latter was a man of some local reputation: the records of him are few, but they contain fresh hints for tracing the connection between Holbein and Italy. Herbster had been a master painter at Basle ever since 1492; and he had travelled, at least as far as Pavia, in 1512. Now, according to a dated portrait,† he sat to Holbein in 1516, when the youngster was hardly settled at Basle. The talk of such a sitter may have induced his painter to follow in the same Italian track; but on the other hand, for ought we know, Holbein's fullest acquaintance with Leonardo da Vinci, and also with the Carthusian convent at Pavia, may have been made through the portfolio of Johann Herbster.

The barbers do not appear at all among Holbein's colleagues, as far as Dr. Woltmann's extracts go; but a glazier unexpectedly makes his appearance. Thus, one of the two great northern artists took rank among ordinary tradesmen. He could never hope to rival such great grocer-barons as the Fuggers of his native Augsburg. And what said the other great northern artist, Albert Dürer, when (in 1506) he was on the point of returning home from Venice:—"Oh, how I shall freeze for the sun! Here I am a lord, but at home a spunger!" Dürer was fortunate in having a patron who could heartily sympathize with his grievances; and it was to him, Bilibald Pirckheimer, that the simple-minded artist lamented his being a mere "spunger." His gift of high imagination had its usual drawback, vanity; and he was consequently very thin-skinned. We suspect that Holbein was much more robust. It is said (it may be mere gossip, but the story is probable enough) that, on his revisiting Basle, after his first flattering reception in England, the upper circles offered to introduce him to their wives and daughters, and were disgusted at his preferring his old pot-companions. The Guild-brethren were doubtless these pot-companions of his; but they may have been something better too,—true friends perhaps, who had helped him at a pinch. Thus the story has two sides to it. The candid biographer, Charles Patin, who relates it,* adds that Holbein was a downright toper; but he luckily gives his authority for saying so; and we shall presently show that the words of Erasmus, which he quotes, were nothing but a small joke, uttered in exchange for a small joke of Holbein's.

We leap at once into a different sphere when we turn from the poor painters' Guild to the circle of Erasmus. He was fond of the arts, and had himself been something of a painter in his youth; yet he was not likely to consort much with German artists. One or two of them may have equalled him in native genius, but his scholarship had raised him high above their level. Not that he cared a straw for pomp or place; indeed, he dreaded them. Splendid offers had been made him from many courts, especially from that of Rome; but he preferred Basle. He esteemed it a veritable "Seat of the Muses," aloof from the bigotries of Papist and anti-Papist. There he lived at ease, in the house of Froben the printer, making it a centre of learning and social refinement. Of all the portraits of this "little old mannikin," as Albert Dürer called him, none pleased him so well as those by Holbein. One of the best is that at Basle. His naturally spare features are sharpened by thought and study; and his great work lies open before him,—his edition of the New Testament; yet there is a suppressed smile upon his thin lips. We feel that he cannot altogether subdue it, in spite of his veneration for the text; for passage after passage recalls to him some scholastic nonsense of the commentators. To purify the text and scourge the commentators was his main business at Basle. But there is another book of his,—a small one indeed, by comparison,—that is more personally connected with Holbein. This is his *Praise of Folly* ("Laus Stultitiæ"), a work that soon ran through many Latin editions, and has since been translated into most of the modern European languages. It is sometimes

* *Holbein und seine Zeit:* von Dr. Alfred Woltmann. Erster Theil, mit 31 Holzschnitten und einer Photo-lithographie. Leipzig. 1866.

† In Mr. Baring's collection. See Dr. Waagen, *Treasures of Art*, vol. iv. p. 97.

* In his edition of Erasmus's *Laus Stultitiæ*. Basle. 1676.

known as *Moria*, from the Greek word for *folly;* and it is dedicated to Sir Thomas More, as a fool (Morus) in name, if in nothing else. The most precious copy of the work is one belonging to the edition of Froben (1514), preserved in the museum of Basle; it is adorned with eighty-three pen-and-ink sketches by Holbein.

The immense success of the *Praise of Folly* would surprise the modern reader. Its mythological quips and its critical paradoxes would seem stale or pointless to him. Yet the spirit of the book is modern, and reminds us of Thackeray and his *Book of Snobs*. It was intended to satirize very different vices, and to amuse a very different public. The discourse is general; the periods are rounded; and the style is altogether rhetorical, often vehement, and sometimes coarse. But still there is much of Thackeray's manner, in the mingled cynicism and geniality with which the author greets his brother fools. We will attempt to give a very brief abstract of it, without making a literal translation of any passage. A large audience is assembled, waiting with knit brows for some solemn lecturer,—when Folly bows to them from the rostrum, and their faces expand. "I perceive," she says, "that you were expecting one of my inferior professors; but I have found time to come in person; and I have chosen the theme most worthy of your attention; namely, the praise of myself." She makes a long exordium to prove her superiority to all the Olympian deities, especially to the Goddess of Wisdom, who was nothing but the offspring of a headache. "If you ask me," she continues, "where are my temples, I answer, within yourselves. I am content with the unconscious worship of my votaries. When my son, the Emperor, is seated on his throne, I lend him my cap and bauble: the boor adores them as the insignia of divine authority; and I bless him, and he is happy. When my son the Pontiff has set up a new idol, and its paint glows in the broad sunshine, the boor's wife lights her farthing candle before it; and I bless her, and she is happy." Folly proceeds to show the supreme blessedness of vanity, whether individual or national. Thus, the father admires the reflection of his ugly self, in the little squeaking puppet which is placed in his hands. Thus, the Englishman brags of his fair women, his fine musicians, and his dainty dishes. This clause, we must stop to remark, was not meant to be quite so ironical as it sounds now; for at that time England did really enjoy a good reputation for music and cookery. To return to the lecture-room. Folly confesses that she is tempted, now and then, to chastise some of her forgetful children. She sometimes sees a grave judge, or graver pedagogue, stalking across the market-place; she suddenly looks round the corner in the shape of a buxom lass, and he catches her eye, and stumbles, and does penance in an old market-woman's basket of eggs. For the more hardened reprobates who have absolute faith in their own wisdom, she reserves a much more awful punishment: she confronts them with one another. Hence arise wranglings and bloodshed; hence the rack, the dungeon, and the stake. She then resumes her pleasing topic, the praise of herself. She enlarges upon Solomon and other first-rate authorities in the most approved style of the followers of Duns Scotus. She takes occasion to commend one of her sons, her best Erasmus. Finally she extols her plump darling, the genuine swine of Epicurus' sty: and contrasts him with the lean scholar, so absorbed in his midnight studies that he mistakes his oil-flask for his wine-bottle, and dies at his book for lack of a dinner. "And so farewell," she concludes, "and enjoy all fruits, except that of the tree of knowledge: laugh and grow fat, my loving children and beloved fools."

All the points upon which we have been dwelling were illustrated by Holbein, from the first bow of Folly to her last wave of the hand. Her mock professional airs are excellent, and so are the gestures of her hearers, whether they are grim with idiotic attention or frantic with idiotic applause. Most of the other designs have rather disappointed us; but then we have only seen them in engravings; and photography alone could reproduce these trifles of a master hand. Dr. Woltmann says that they were evidently dashed in at various periods of leisure. They are always carelessly, though well drawn, and the ink differs in different places. It is amusing to guess how Holbein could have understood the Latin text. We are inclined to agree with Hegner,* that he must have gone through it with a learned friend. This may have occurred during his stay at Lucerne, and on the title-page is the signature of Myconius, who was then a famous schoolmaster at Lucerne. Myconius has added the inscription, "Hanc Moriam pictam decem diebus, ut oblectaretur in ea, Erasmus habuit," which surely means simply that Erasmus kept this pictured *Moria* for ten days, in order to amuse himself with it. Dr. Woltmann believes that somebody had presented it to Erasmus, and that at his death it came to Myconius. Our own belief is that it belonged to Myconius from the first, and that Holbein read it with him, and made the sketches at Lucerne. It was then lent to Erasmus, who returned it after scribbling a word in it, to which a most absurd importance has been attached. Against the figure of the half-starved scholar, Holbein had printed the name of Erasmus. The latter looked for the fat pig of Epicurus; he found it portrayed as a gross man, with one hand on a woman's shoulder, and the other lifting a bottle to his mouth; and to this he affixed the name of Holbein. Such an interchange of small jokes might have been made between the most respectable churchwardens in the world. And yet this is the evidence brought by Charles Patin to show that Holbein was a sot. Really, if it were evidence at all, it would be in his favour, for one might fairly argue that Erasmus, a man of the highest social dignity, would never treat a drunken ribald with such familiarity.

Gossip is a hydra, whose filthy hands sprout up

* *Hans Holbein der Jüngere*, by Ulrich Hegner. Berlin. 1827.

like mushrooms. Hegner gives two or three more instances of it; one of which is worth mentioning. Down to the middle of last century, so wasteful of its Holbeins, there was a house at Basle, known as the *Dance-house*. On a broad space above the first-floor windows was painted a band of country lads and lasses, crowned with flowers, and dancing lustily to two bagpipers. The place had been a tavern, people said, where Holbein had paid a long reckoning with his brush.

But they forgot to observe, adds Hegner, that the whole façade, three stories high, was covered up to the garrets with frescoes. The decorations were festive, and some of the mythological figures might have suited a wine-shop; but, next to the dancers, the most prominent object was Marcus Curtius on horseback, plunging into the gulf. The oldest mention of the building (in 1577) merely calls it "a private house." Some water-colour copies of it, and a tracing of the original sketch, are in the Basle Museum; and there also remain two or three studies of separate portions, which prove that Holbein reconsidered and improved his plan with his usual attention to the minutest details. This toilsome execution of many great works, together with numberless designs for jewellery, glass-painting, carving, &c., must have occupied most of his hours. Year after year he worked on patiently, till the plague cut him short in mid career; and his conceptions were rich and beautiful, his eyes fresh, and his hand steady to the last. His works ought to outweigh a thousand scandals: they bear witness that he had a strong taste for joviality, but no more than was becoming in a young brother of the Guild of Painters. Indeed, he was probably more refined than any of the brotherhood. He was a painter of realism, but mostly in its nobler forms; and his art, even in undress, is comparatively pure. Among the drawings in the Basle collection, those of Urs Graf and Nicolaus Manuel, and others, are often, we are told, unfit for description; whereas those of Holbein are very seldom coarse, and never obscene.

What a pity that such a man should have left *one* blot on his memory that can hardly be cleansed away. We allude to his neglect of his wife. There were extenuating circumstances, no doubt, as there always are. She was vulgar and ugly, as we see by her portrait; and in all probability she was much older than her husband. Nothing has shocked Dr. Woltmann more than discovering that she was a widow, with a half-grown son, when she married Holbein, and that her name was Elsbeth Schmidt. These would have been valid reasons for Holbein's avoiding her, as long as she was widow Schmidt; but they became invalid as soon as she was Mrs. Holbein. Other excuses present themselves, as at least not impossible. He could not have been much more than twenty-five at the time of the marriage: and young men of genius are often more easily entrapped than common-place people. Again, her eyes are red, says Dr. Woltmann, as if with weeping. May not the cause have been less sentimental? She is reported to have been a shrew; may she not have inflamed her temper and her eyes by emptying some of the bottles which have been laid to the charge of Holbein? Such things *may* have been; but we must beware, lest we, in our turn, should be scattering the seeds of calumny. There is really nothing known against the poor woman, except her bad looks, her widowhood, and her big boy. As to the date of her portrait it must have been about 1526-9. It was painted in oils upon paper; the figures were afterwards cut out, and pasted on wood; and in doing this the last cipher of the year was clipped away, so that it now stands 152–. The boy at her side is Philip Holbein, whom his father apprenticed to a Parisian goldsmith in 1539: he has rather a whining look, but not otherwise a bad countenance. The childish action of his little sister is excellently rendered, and she is shapely, though not pretty. The homespun attire of this family group, artistically considered, is worth whole wardrobes of cloth of gold: and the flesh-colours are Titianesque. The sitters were treated with tender care, as sitters, but not, we are afraid, as objects of daily concern. Holbein did not desert his wife: he maintained her, and twice revisited her; but she never joined him in London. The natural consequences followed. In 1543, when he was moved by fears of the plague, which were soon to be too well justified, he had to do his best to provide for two nameless little children. But we are anticipating the dismal end. It lies far beyond the scope of our present series.

Our story of Holbein in Germany would be very incomplete if we said nothing more of Bonifacius Amerbach. His father, the well-known printer, had nourished one great ambition,—to produce noble editions of St. Augustine and St. Jerome. He had published the whole of the former; the publication of the latter had been interrupted by his death, but it was completed by his three gifted sons. Bonifacius, the youngest, was born in 1495; the same year as Holbein, if our new chronology is correct. He played a leading part at Basle as a lawyer and politician. His talents had been early developed; and his tutor had more than once commended him to the notice of Erasmus, as a "thorough Erasmian." In one respect he was superior to Erasmus: he was a man of high moral courage. His portrait, considered by some critics as the most perfect of the Holbeins at Basle, displays him in the flower of young manhood; for it was painted in 1519, when he was twenty-four. His eyes are small, but of the purest blue; his features are well chiselled, and their vigorous beauty is heightened by the silky curls of his auburn beard. His manners are said to have been singularly engaging. His gifts of mind and body won the admiration of the day; but it was the stanchness of his heart that preserved his memory. The world has clean forgotten how he used to lead the song and dance to music of his own; and he has left few traces of his erudition behind him; but he will long be remembered as the great collector of the works of Holbein. He bought what no one else would buy,—the *Dead Christ*, for instance, which was unfitted by its stark

reality for either church or banquet-hall; and when Holbein was absent in England, his wife and children found a ready friend in Amerbach. He seems then to have made a clean sweep of the studio. His chief prompter was friendship, but it acted in accordance with his taste. His house at Little Basle (on the right bank of the Rhine) was a gallery of art. A few objects were added by his son, and the contents were purchased by the Town Council in 1661. They consisted of forty-nine paintings, and a cabinet with thirty-seven drawers full of sketches and engravings, together with coins, ivories, and various precious curiosities. Holbein was represented by fifteen of the paintings, 104 of the drawings, a sketch-book, the illustrated *Praise of Folly*, and duplicate copies of his biblical designs and his *Dance of Death*, besides 111 of the other wood-engravings. One of the paintings, a *Last Supper*, which we described a month ago, was in fragments: they are supposed to have been rescued by Amerbach from the religious mobs of 1529. But we have now to tell of a much greater work, which no care could save. It was destroyed by damp, an enemy to northern art more fatal than even bigotry.

The 15th of June, 1521, bid fair to open a new epoch in historical art. On that day Holbein received a commission to fill the new Town-hall with great works in fresco. There were eleven spaces to be filled, six of them broad, and five narrow. Two of the broadest spaces were left untouched for the present. The rest of them were filled before the end of 1522. The four great subjects, which were then completed, were drawn from classical story. Republican virtue was exemplified by Curius Dentatus rejecting the Sabine gold. Contrasted with him was Sapor the Persian, a type of the brutal arrogance of kings, trampling on the neck of the Emperor Valerian.

Obscurer legends of the Greek republics of lower Italy furnished the two other subjects: they were scenes of self-sacrifice, in stern submission to the law. In the five narrow spaces were single figures: —1. Christ, with a tablet in His hands, charging us all to do as we would be done by;—2. David, harping, with a scroll over his head, exhorting men to judge righteously;—3. 4. and 5. Justice, Moderation, and Wisdom. It will be observed that the large subjects were all political: and this was not altogether owing to the character of the locality. At the time when these were designed, the Protestants (as they were soon to be denominated) had made their way into the town council; but they were by no means supreme there. Indeed, the Burgomaster was a rank Papist, no less than our old friend Jakob Meyer. The two religious parties were united for the time by political sympathies. In this year they effected their common object. The bishop and the aristocrats were deprived of their last privileges. The town-hall was triumphant; and democracy, pure and simple, was depicted upon the walls. The case was altered when Holbein supplied the two deficiencies in 1530-1. Both subjects were then taken from the Old Testament; and one of them was quite after the heart of our own Puritans; it was Saul rebuked by Samuel for not hewing Agag in pieces.

These magnificent frescoes were the wonder of a generation; but before the end of the century they were frightfully scarred by damp. Other artists tried their colours over those of Holbein; but at last they were all charitably covered with green cloth. Out of two or three little bits, and a few drawings, and the town-hall account-books, Dr. Woltmann constructs a very interesting history. But we can only commend it to our German readers, together with the notice of the organ-screen of the cathedral. There are other topics which more emphatically demand our attention.

In the summer of 1521, the burghers of Basle had plenty of local business upon their hands; yet still they could not fail to be profoundly agitated, by hearing of Luther's triumph at the Diet of Worms, and of his mysterious disappearance after it. He subsequently reappeared at Wittenberg, safe and sound, as all the world knows: but for many months even the wise heads were puzzled, and the simple ones were driven quite crazy. At first the Reformers were aghast; but they soon recovered heart, and their energies were only fevered by the agitation. At Basle there was a priest, who preached openly against the mass, and waylaid a procession in the streets, calling the relics "mere dead men's bones." The bishop demanded his arrest, and his congregation, in their turn, defied the bishop. The town council interfered, and managed to edge the priest out of the city. But another soon took his place; and at the close of the year arrived Œcolampadius, the true apostle of the Reformation at Basle.

Meanwhile a sort of revolution had been effected in the town council. Jakob Meyer, though a zealous Catholic, had assisted in stripping the bishop of the last shadow of civil supremacy. He had thus become himself the chief magistrate of Basle. But his seat was a shaky one. In the October of the same year (1521) he was accused of taking bribes from the French king. It was common enough for the magistrates of a free city to receive a *pension* from one of the neighbouring princes. The members of the lesser council of Basle received fifteen crowns apiece; but Meyer had accepted a larger sum. He was compelled to disgorge the surplus; and he was dismissed from office. This was a fine stroke for the Reformers, and won them the Burgomastership. Meyer struggled defiantly against the stream for a few years longer. He enlisted troops for the French king, or for the Pope, as he had done before; and he led them himself into Italy: he returned to Basle, and we hear of him in 1529, the year of the fanatical iconoclasm, when he was the spokesman of the Catholics. Then all records of him cease. But there is a votive picture which will long preserve his memory, and spread his fame far wider than he could ever have dreamed of. This is Holbein's most famous *Madonna*. To every true German heart, says Dr. Woltmann, the *Madonna* of the

Dresden Gallery appeals, as the fairest ideal of German womanhood. The face, all clearness and light, scarce perceptibly broken by the eyebrows; the tenderly drooping eyelids, the graceful build of the neck, and the dimple in the chin; all these are features to be gazed at and remembered with indescribable delight. Even Mrs. Jameson * admits that her half-deified Raphael has never surpassed this Virgin Mother. At her right hand kneel the Burgomaster and his youthful son, the latter holding up a beautiful naked boy; at her left is the Burgomaster's mother or mother-in-law, his wife, and their daughter, a girl just entering her teens. This is the old-fashioned monumental arrangement. It is not improbable that the elderly woman, though represented as living, was just dead when the picture was first designed, and that it was literally her epitaph,—intended, namely, to be placed above her tomb.

Every visitor to the Dresden Gallery is struck by two things,—the loveliness of the *Madonna* and the sickliness of the child. The gossip will tell him that the child is not Christ at all, but a sick infant of Meyer's; an idea which seems to have originated with Ludwig Tieck. To this some will add, that she has set down her own beautiful boy in front of her. Another suggests, and the notion is at least more agreeable with the character of the age, that the design was made in memory of the naked standing boy, and that the infant in arms represents his soul. But the conjectures are all thrown away, for the infant is extending his hand in the act of blessing. Moreover, this picture must be compared *with the original*; for, after all, the Dresden *Madonna*, though entirely designed, and partly executed by Holbein, is *not* a first original.

At Darmstadt is the great treasure, the property of the Princess Charles of Hesse. And yet, perhaps, both treasures are equal; for the enthralling beauty of which we have spoken is not to be found in the Darmstadt picture. She is here painted from an entirely different model, with more decided features, more marked and darker eyebrows, and an expression of more forcible grandeur. No one could talk here of a sickly child, for the child is smiling brightly. Dr. Woltmann proves, we think conclusively, that this is entirely Holbein's work, executed in his first period; and that the Dresden picture is later, and only Holbein's so far as the *Madonna* and child are concerned. *These* were new, and so was the plan of the architectural background: the family figures were copied by an assistant. The latter are very fine; still they are clumsy when compared with the originals. The Darmstadt picture was almost certainly placed in a church, and withdrawn by its owner when the tumults began. Its history is dark; probably because it followed the dark fortunes of the Meyers. The males of the family are supposed to have quitted Basle soon after 1529, like many of their co-religionists. The mother accompanied them, no doubt; but she left one member of the group behind her. The Dresden *Madonna* can be clearly traced back to the immediate descendants of her daughter Anna; and Dr. Woltmann has adorned its history with a pretty episode, partly conjectural, but partly founded upon documentary evidence. We must premise by stating that Anna's descendants possessed, besides the *Madonna*, two independent portraits of her parents; fine old copies after the Holbeins, which were lithographed for our Christmas number. And now for Dr. Woltmann's story. Anna, the demure little maiden of the picture, kneeling beside her mother, was just entering her teens when the Darmstadt original was painted: she was just leaving them, about the end of 1529, when she was married, and had a new household of her own at Basle. Her parents were on the point of migrating; and her most precious wedding-gifts were their portraits and the Dresden *Madonna*. Here she could still see the old household, including her former self, all lovingly united. But for the central figure Holbein had chosen a fresh model. The Virgin no longer appeared as the sublime patroness of the dead: she was a spiritual being, but of a softer splendour, better suited for the home of a young wife. Such is the story of the two *Madonnas*.

The second volume of Dr. Woltmann's work may be expected before long; and it may possibly tempt us to give a short abstract of his views (a couple of papers, perhaps), on Holbein in England. Of Holbein in Germany we have little more to say. At the close of 1522 the town-hall frescoes were suspended, and nearly all important works of art came to a stand-still. The Church and State authorities were hoarding their funds, with grim forebodings of civil war. Holbein could find few private patrons like Meyer or Amerbach; and he was not the sort of man to live quietly upon the mere alms of friendship. He could earn his own bread by designing for publishers and goldsmiths; but it was not enough to feed his family. His father died in 1524: his own home was unhappy, and he began to turn his thoughts towards foreign countries. It is probable that his uncle Sigmund at Berne, and his other German friends, could offer him very poor prospects of employment. Erasmus urged him to try England, and sent one of his own portraits to Sir Thomas More, with a letter commending the painter to his notice. The letter is lost; but More's reply, dated the 18th of December, 1525, runs thus:—"Thy painter is a wonderful artist, but I fear that England will not prove as fertile as he hopes. Yet I will take care that he shall not find it utterly barren." Holbein still hesitated. But matters did not mend at Basle. After 1522, there is no entry of payments made to him by the State, till March, 1526, and that is for painting two heraldic shields! At length the important moment arrived. A letter from Erasmus to a friend at Antwerp, dated 29th August, 1526, contains the following passage.

"The bearer of this is the man who has painted me. I will not burthen thee with his praises, though he is an

* "Legends of the Madonna." Second edition, p. 102. London, 1857.

excellent artist. If he desires to visit Quintin [Matsys, the painter], and thou canst not spare time to go with the man thyself, thou canst let thy servant show him the house. Here the arts are freezing: he is going to England to scrape together a few angels (*Hic frigent artes, petit Angliam, ut corradat aliquot Angelotos*)."

The poor pun, and even the frigid arrogance of Erasmus, may be excused; for he was evidently a good friend of the painter's. As for the English *angels*, we all know that Holbein gathered them in a golden harvest.

*** In consequence of the statements in the second part of the review of Dr. Alfred Woltmann's work, published in the December number of NATURE AND ART, relative to the supposed loss of *Holbein's original portrait of Johann Froben*, we received a letter from a gentleman claiming to be the happy possessor of it. We here give his own words, without hazarding an opinion on the subject, as we think it may be interesting to some of our readers to follow up the clue of the lost treasure thus afforded them.—ED.

Sheriff Hutton Park, York.

Dear Sir,—There is no doubt as to its originality, and if, as I understand by the review of Dr. Woltmann's work in NATURE AND ART of December, Holbein painted but *one* picture of Frobenius, then *our* picture is *that* picture.

This portrait came into our possession on the division of a large collection of pictures belonging to a gentleman connected by marriage with our family, and also a kinsman of the famous Lord Bacon. In this way, we became possessed of some very valuable pictures. I have the inventory of these pictures as made on Mr. Bacon's death; I do not recollect the date, but, I think, in the early part of last century. The picture is there described, "Frobenius, by Hans Holbein." There is not, and never has been, any doubt about the genuineness of the picture. Indeed, it is hardly necessary to tell you (even if the picture did not speak for itself, by its excellence, as indubitably by Holbein, and by his signature or monogram being painted, not, I may say, *on* the picture but *in* the picture), that the fact of what the picture was acknowledged to be at the time of Mr. Bacon's death, is strong evidence of its genuineness.

I am, faithfully yours,
LEONARD THOMPSON.

THE ATLANTIC YACHT RACE.

CHRISTMAS-DAY, 1866, will long be remembered by all who take an interest in the manly pastime of yachting, for on that anniversary of our great national festival there was brought to the shores of England by our transatlantic cousins as novel a "sensation," even in these prolific days of sensation novels, as the first arrival of Phœnician galleys must have been to the ancient Britons. We are indebted for this sensation, with all its characteristic originality and boldness of execution, to that remarkable "go-ahead" propensity which is so peculiar a feature of the idiosyncrasy of the American Anglo-Saxon. The abstract notion of a yacht race across the Atlantic in the best season of the year would, amongst an ordinary people, have sufficed to fill Ambition's measure to overflowing. But, desirous of even more than realizing the remark of Horace,—

"Horrida callidi vincunt æquora navitæ,"

the American yachtsmen evidently sought to *improve* the difficulty of their self-imposed task, and to add to the intensity of the "sensation" by courting all the perils attendant upon mid-winter navigation.

A brief description of the three yachts engaged in this remarkable contest is deemed worthy of record in the pages of NATURE AND ART, as much from the general interest which the event has excited throughout the length and breadth of the land, as from the advantages which may hereafter be derivable through having practical data at hand, with which to compare the conditions and results of any future ocean races.

Establishing the tonnage of the yachts according to American measurement (arrived at by taking length of keel, by which multiply extreme breadth, and the product by depth of hold, dividing total by 95), the *Fleetwing* is 206 tons; her length on deck being 106 feet; keel, 93 feet; beam, 23 feet 8 inches; depth of hold, 9 feet 3 inches; draught of water amidships, 11 feet 6 inches. She was commanded by Captain Thomas, of the packet ship *City of New York*, and carried a crew of twenty-two men. Her owner, Mr. George Osgood, was represented on board by Messrs. R. Centre and Staples, members of the N.Y.Y.C., and also judges on behalf of the *Henrietta* and *Vesta*. The *Vesta* differs from her opponents by carrying 18½ feet of "centre-board," or false keel (like that of the celebrated yacht *America*), which can be lowered and raised as desired. She is slightly inferior in size, being 201 tons; her length on deck is 105 feet; keel, 98 feet; beam, 25 feet; depth of hold, 8 feet 9 inches; draught of water, 7½ feet, in addition to her centre-board. The *Vesta* was commanded by Captain Dayton, her crew consisting of twenty-six men. Mr. Pierre Lorillard, her owner, was represented by his brother and Colonel Bayard Taylor, the celebrated author, who also acted as judges for the *Fleetwing* and *Henrietta*. The *Henrietta* measures 205 tons, and has more rake to her masts than either the *Vesta* or *Fleetwing*, which latter yacht she otherwise closely resembles in form, with the exception of having much more sheer. The *Henrietta* was commanded by Captain Samuels, of the well-known clipper ship *Dreadnought*, and carried a crew of twenty-four seamen. Mr. Bennett was the only owner who sailed in his yacht, and he was accompanied by Messrs. Jerome and Knapp, who were judges for the *Fleetwing* and *Vesta*, and by Mr. Fisk, of the *New York Herald* newspaper.

New York was naturally alive with the excitement arising out of this unprecedented contest for a week or two preceding the day fixed for the race. The intense interest thus manifested throughout the "Empire City" was in some degree attributable to the very even chances of the three competing yachts, although the *Fleetwing* was slightly the favourite. When the day appointed for the start—Tuesday, December 11th—arrived, the excitement had reached its culminating point. At every available position vast crowds had assembled, who vociferously cheered the occasion and each preparatory movement made in connexion with it. The vessels in harbour and the craft plying on the East and Hudson rivers, and the villas upon Staten Island, off which the yachts lay, were gaily decked with flags. Steamers had been hired to convey the members of the New York Yacht Club, and the numerous friends of the competitors, to Sandy Hook, the scene of departure for the hazardous enterprise. The day was bright and the wind westerly and favourable. The air alternately vibrated with the enlivening music of many bands, and the thundering salvoes of many salutes fired in honour of the adventurous yachtsmen.

At eleven o'clock the *Henrietta's* racing signal was run up, and then the three yachts were taken in tow by their respective tugs to the starting-point. The *Fleetwing* took up her position about a mile to the eastward of Sandy Hook; the *Henrietta* was nearest the shore; and the *Vesta* was stationed midway between her two antagonists. They waited thus until one o'clock p.m., when Mr. Fearing, the starter, gave the signal; and then, at the sight of a little puff of smoke and the booming sound of a gun, up went foresails and topsails on all three. Scarcely had the wind filled these sails when the second gun was fired, and the yachts' whole spread of canvas was shaken out. Before the first burst of cheering from the excited spectators had

died away, the yachtsmon heard the still more congenial sound of the sea, hissing, rushing, and caressing their vessels as they gathered way and cut through the foam-crested waves of the Atlantic. Lying inshore, the *Henrietta* was the last to catch the breeze, but quickly recovered this slight delay as she veered off from the land. For some time the steamers and tugs escorted the yachts in procession, the bands on board the former playing "Auld Lang Syne." Tho wind gradually rose and the yachts increased their speed, the farewell cheering became fainter and fainter, and the last of the tugs, with a parting hurrah, turned homewards; while, in responsive cheers, the crews of the yachts bade a temporary adieu to the United States. Daylight rapidly declined, the sun sinking beneath the western horizon in a departing halo of crimson and gold; and at nightfall the friends lost sight of each other until they again met in the harbour of Cowes.

The *Henrietta*, showing a blue flag by day and a blue light at night, sailed along over the Atlantic course; making the Scilly Isles on December 24th, at 7.45 p.m., passing Hurst Castle the next (Christmas) day, at 4 p.m., and arriving off Cowes at 5.40 p.m.; the winner of this Ocean Derby, having accomplished the voyage in the brief space of thirteen days, twenty-two hours, and forty-six minutes.

Notwithstanding her remarkably swift passage, the *Henrietta* experienced the reverse of fair weather. She once lay to for ten hours in a gale, and in a subsequent calm of ten hours' duration she made but little progress. Afterwards the weather proved tolerably fine, until the *Henrietta* reached the Scilly Isles, and then she encountered, in the British Channel, the fogs, mists, and gloomy weather so characteristic of our climate in the winter season. It was under this cheerless aspect that she reached the goal of victory (without the loss of a strand of rope or a shred of canvas), to be greeted with such hearty, enthusiastic welcome as must have quickly dispelled from the minds of all on board any prejudicial notion that Englishmen's feelings are influenced by the gloomy nature of their climate.

The *Fleetwing* showing a red flag by day and a red light at night, commenced her voyage under most unfavourable auspices, which eventually culminated in the appalling catastrophe so ably depicted by Mr. Dutton. On the evening of December 11th, the *Fleetwing* lost her weather square-sail boom; the day following her jib-boom was carried away, and she again lost it on the 16th. At 9 p.m. on the 19th, while she was running dead before the wind, she broached slightly to, when a huge wave broke on board amidships. As her stern sunk in the trough of the sea, the immeuse volume of water rushed aft; washing overboard six of the eight men forming the watch in the cockpit. The remaiuing two (the mate and the helmsman), as also the two look-out men, stationed forward, escaped the awfully sudden doom to which their ill-fated comrades were hurried. During four hours the *Fleetwing* lay to, while those remaining on board fruitlessly endeavoured to discover the victims amoug the waves which had engulfed them. Continuing her voyage with a diminished and naturally depressed crew, the *Fleetwing* eventually reached Cowes at 2 a.m. on December 26th; thus arriving some eight hours after the winner.

The *Vesta*, which showed a white flag and white light, had remarkably favourable weather throughout her passage, and neither shipped a sea nor lost a rope. Taking a more northerly course than her opponents, she escaped the gale which caused the *Henrietta's* long detentiou and the *Fleetwing's* lamentable accident. Owing, however, to the deviation of her compasses, she went considerably out of her true course, and had to bear up off the Scilly Isles, which she sighted one hour earlier than the *Henrietta*, and to make good her lost ground. In addition to this, the pilot, whom she picked up about ten miles off the Needles passage, mistook his course, and almost ran her ashore and wrecked her on the rocks off St. Catherine's; by which error she was again unnecessarily delayed. She reached Cowes the last of the three yachts, arriving at 3.30 a.m. on December 26th, one hour and a half after the *Fleetwing*.

The distances respectively sailed in the race are stated to be as follows:—*Henrietta*, 3,040 miles; *Vesta*, 3,069 miles; and *Fleetwing*, 3,200. The respective maximum and minimum daily distances sailed are, *Henrietta*, 280 and 113 miles; *Vesta*, 277 and 165 miles; *Fleetwing*, 270 and 136 miles.

Viz.

MUSIC AT HOME.

WHEN Christmas is fairly over, and the old gentleman with the scythe and hour-glass is deposed in favour of that infant Hercules, the New Year, Britannia forthwith inclines to festivity, and devotes herself to party-giving. Pantomimes and burlesques are very well in their way, but the young people must be made jubilant at home. Those who live in Rome necessarily follow in the wake of the genteel Romans; and all who take delight in that institution known as "Society," are called upon to do their best towards promoting what vulgar little boys, partial to sliding, term "keeping the game alive." Matrons who, with their daughters, sail into two or three *salons* per evening, or even one per week, are required to occasionally throw open their own apartments; and persons who partake of hospitality as represented by quadrille bands, bon-bons, ices, and champagne, must offer similar delights in return. Festivity may not be hydra-headed, but it takes varied forms, and a few remarks upon the comparatively mild delights of a "musical evening" may not, perhaps, be considered out of place. Materfamilias having no Harlequin's wand at command, cannot "turn the house upside down" for the delectation of her dancing friends without considerable inconvenience; she therefore chooses a quieter form of entertainment, and perching Euterpe upon the grand pianoforte, invites gentle and simple to worship the second Muse after their own fashion, that is to say, after the fashion of the day; for to be unfashionable in music is to meet with looks of pitying wonder from some of the brightest eyes in the world. Could society be furnished with statistics relating to musical parties, it would probably transpire that during the last quarter of a century these entertainments have increased a hundred-fold. There are *soirées musicales*, where court beauties all a-blaze with diamonds, find themselves face to face with operatic stars in the evening dress of private life; for the loving and confiding Margherita does not always wear her hair in long plaits, neither does Mephistopheles appear in scarlet hose when he sings his (strictly speaking) fiendish serenade. There are also the musical parties of middle-class life, where voluntcers take the place of hired mercenaries; and where Mendelssohn's *First Violet* pales before a jewel of such exceeding brightness as the fashionable

Floribel's last ballad. The strong-lunged and vulgar drones in the London beehive have likewise their vocal and instrumental festivals, though invitations thereto are given verbally, and the descriptive term "sing-song" is substituted for "soirée." The consumptive nightingale Violetta's *Ah fors è lui*, floating from the marble halls of Belgravian squares into the midnight air, helps to prove music a resouree with the "wealthy and curled darlings of the land;" the echoes of the latest speeimen of Ethiopian serenader pathos (or bathos) behind the drawing-room blinds of Harley, Gower, or staid Queen Anne Street, suggest that the divine art is held in equal esteem by the eomfortably situated middle elasses; and is it not reeorded by a thousand wandering minstrels that even the dwellers in the most sordid slums, have, in common with their betters an ear for music and a mind to cultivate it?

Poor Euterpe has sometimes little reason to admire the taste of either patrieian or plebeian, and eertainly deserves better treatment than she frequently experiences at the hands of that section of the eommunity whieh may be designated the happy medium between high and low. We are all at liberty to aceept the dogma, "a little knowledge is a dangerous thing," with a eertain degree of reserve. When, however, that "little knowledge" is misapplied, in music espeeially, it conduets natural taste on the downward road with alarming rapidity, and promotes something more than a toleration of things known to be meretricious in every sense of the word.

The ladies, "heaven bless 'em!" as a joeose contemporary ecstatically observes, cannot, perhaps, be expected to dive deeply into the art of music; but even skimming over the surface after the most approved custom, they might surely gather up more precious waifs and strays than they do. A little counsel is needed, but is, unfortunately, seldom forthcoming. Of what artists themselves might do for the advancement of music we shall hereafter speak; but at present the maids of merry England are by no means indebted to the great body of concert vocalists for information as to where the best songs, native and foreign, are to be found. Assuming a young lady with a *soirée musicale* in view, and in seareh of a song; how is she guided in her ehoice when face to face with a thousand sheets of spoiled paper in a music-shop? She, very probably, could count all the song-writers she ever heard of on the fingers of one white hand; and as for estimating the worth of a ballad by looking at it, that is impossible. She could not, to save her life, purse her rosy lips and softly whistle the melody, supposing propriety sanctioned such a proceeding; and as for the aeeompaniment, that is very often a sealed book at first sight. Aurora is far more likely to require of Brown, Jones, or Robinson behind the counter, "a pretty song with an easy accompaniment," than simply a "good one," without any sueh stipulation. Obliging attendant Brown understands the dainty maiden at onee, and has quires of something worse than mediocrity conveniently at hand. It is not assistant Brown's plaee to tell his charming *vis-à-vis* that Mr. Henry Smart wrote an exquisite song called "Hateful Spring," with a difficult accompaniment; that Mr. J. L. Hatton's "Rainy Day" admits of no compromise in the latter particular; or that Schubert and Mendelssohn composed songs which more than repay any one for the trouble of really studying them. He imparts no such information, but produces "Mopings at Daybreak," and "Midnight Maunderings," by some feebly twinkling, though fashionable star of the musical firmament, and they are forthwith ordered of him. "Counter Songs," that is to say, compositions calculated to meet the views of those who have no deep feeling whatever for music, and who are anxious to discharge their individual obligation with the least possible trouble to themselves, must be in what are called, singularly enough, "easy keys." Five flats, or the same number of sharps, by way of signature, are abominations in the eyes of young ladies; and an accompaniment made up of anything but the simplest chords is almost inadmissible. The supply of any kind of trash is generally equal to the demand; and mediocrity, at the best, flourishes exeeedingly at *soirées musicales*.

We hear much in the present day of "missions," and it eannot surely be questioned that to the daughters in a family eircle is chiefly eonfided the honour of musie as an art. The responsibility is unconsciously accepted, and its importanee decidedly undervalued. Young ladies possess, unknowingly, an immense power either to advanee or retard the progress of true taste, and it is in home cireles that everything noble and beautiful in the world of sweet sounds should be most eagerly sought after. Fathers and brothers, as a rule, neither sing nor play the pianoforte, but they frequently listen, and their taste must be influenced by what they constantly hear. There are cheering exceptions to every rule, and the newest valse, vocal or instrumental, is not the summit of every maiden's ambition. While all tacitly admit singing and pianoforte-playing as duties owed to society; and while, as we have already said, the vast majority take the least possible trouble in rendering this suit and service, there are some who set about the work in an earnest and conscientious manner. Why should a composer submit to the indignities heaped upon him by his delightful young tyrants? Why should his aecompaniments be mercilessly "vamped," as they oftentimes are, and why should not his unfortunate unities be properly respected? Why, on the other hand, should his lilies be repainted, and his fine gold—the pride of his fancy—be re-gilded, either by professionals or amateurs partial to ornamentation; and why in any case should not his intentions be always religiously respeeted? Admirers of music are plentiful as blaekberries in Oetober, but devotees in private life do not abound. Those who take up musie as a matter of course will condescend to everything indicated above; but true lovers of the art will do nothing of the kind. They give the composer credit for some kind of thought and mental power; and first endeavouring to dis-

cover his meaning, next set about translating it in a fair, candid, and painstaking spirit. The minority who decline any vocal commonplace that happens to be fashionable, and turn their attention to better compositions, have their reward. Music is, to them, a repose and a consolation, which time cannot weaken, and they have the satisfaction of knowing that many of their friends rely upon their judgment, and respect them for their integrity.

At the generality of musical parties, vocal attractions are far more potent than instrumental; and in common justice a protest may be made against the very undignified position which that friend of man and woman, the pianoforte, is made to accept. Pianoforte solos form part of the soirée scheme, but society is sometimes very unmannerly in reference to the unfortunate pianist. Conversation in the private boxes of theatres is not the only sign by which the *élite* proclaim their contempt for the usages of common politeness; for in ordinary way, the commencement of a crack-brained fantasia or a dreamy nocturne seems to quicken the loquacious powers of every one in the room. One of the Abbé Liszt's acrobatic transcriptions is allowed no better chance of making its mark than a delicate, fanciful, and tender Impromptu of Chopin—"that angel of melancholy." It is useless for the presiding genius at the instrument to pound away at octaves and arpeggios, for the odds are too great, and resignation becomes a virtue. The lady or gentleman friend of the family may adopt the word *forte* for his or her motto, but the remaining guests will not be outdone, and take "fortissimo" for their watchword. "Thanks," and "charming," are the terms of acknowledgment and admiration indulged in by those who have not heard a note of the solo; and the discomfited pianist emerges from this kind of social purgatory with, possibly, a settled resolve to "assist" at musical parties no more. Forbearance comes too late, and common consideration is entirely at fault when active tongues stop at the last instead of at the first chord of a pianoforte piece. The vocalists have things their own way at musical evenings, and those who undertake to do their best for Mendelssohn, Stephen Heller, or even Mr. Brinley Richards, may consider themselves fortunate if one or two in the assembly pay the slightest attention to them. The intelligent "wallflower" nearest the instrument is occasionally a consolation to the pianist in these seasons of affliction, for it may happen that the masters and mistresses of houses devoted to soirées prefer to indulge in "big talk" about big people, while a little lady or gentleman with a great soul is being sorely troubled by garrulous dowagers, coquettish maidens, and plethoric old gentlemen, with no more love for music than for butterfly-catching. Good example does not always proceed from the quarter expected, and the habits of those who attend musical parties must greatly change before the common justice above referred to, is rendered to the piano soloist.

Those who in the course of a season make the somewhat wearying round of concerts and matinées, cannot fail to perceive how greatly the dignity of music is confided to public singers. What vocalists might do in the cause of the art they profess, and what they do, are two very different things. They might, and should, lead popular taste into the proper channels, and by their choice of songs inculcate a love for compositions in which something like mind and thought exist. They might also creditably employ themselves in fanning that divine spark, of which we see so little, but which, nevertheless, flickers through every page of good music; and set examples worthy of themselves, as well as of incalculable service to their fellows. The concert-room gives the law to the drawing-room, and it is the fault of the professional singers themselves, if persons really interested in music are forced to deplore this fact, in place of congratulating themselves upon it. Artists are not ethereal beings, neither can they afford to postpone the making of hay till the sun ceases to shine; but it is certainly possible for them to do more for the art, and as much for themselves, by following other rules than those at present in force. We, as a great little Corporal was pleased to observe, are "a nation of shopkeepers," and not averse to the turning of honest pence. This is an indisputable fact; and as some lords of broad acres may be prevailed upon to sell their game to a shopkeeper, so it is just possible a vocalist of the highest reputation may, for a consideration, be induced to affix his or her sign manual to a song or ballad decidedly not of the highest school of art. It might, perhaps, be too bold to assert that any form of "refresher" is ever offered by a publisher to a vocalist, and still bolder to affirm that pecuniary compliments are paid by music-shopkeepers, and accepted by the stars of the musical hemisphere. The outer world may not say point-blank that professional singers are paid by publishers to force unmitigated trash down the public throat, but the outer world aforesaid is at perfect liberty to put its own interpretation upon certain practices now too much in vogue.

A sentimental ballad by the fair Gabrielle Virginie, or by Floribel, makes a very palpable hit, and forthwith commercial enterprise pricks up its ears. More sentimental ballads from the same "eagle plumes" follow in quick succession. They are put prominently forward in the music-shops, and pertinaciously introduced, to the exclusion of better compositions, in the concert-room. That the singer with whom they are identified may have lost his or her voice is a matter of no moment, so that he or she be still sufficiently popular to take these things from platform to platform in London and the provinces, and "make them go" at all hazards. Presently initials (not printed) appear upon the title-pages, and what do the letters L. S. D. in loving companionship mean? Why should the singer's name be written and the composer's printed? If merely a graceful recognition of the musician's genius be intended, there are others equally deserving of the honour.

Another unfortunate dispensation is that which makes some persons composers as well as vocalists, and gives them the opportunity of trying to

popularize their own inventions. Instances both native and foreign might be quoted of this double gift vested in one person, though, unhappily, in very unequal degrees. Herr Streichart is all very well when engaged in the cause of Mozart or Beethoven, but when, on every possible occasion, he bursts into songs of his own composing, Herr Streichart does not advance civilization to the best of his ability. So, from one of the most popular English tenors, his countrymen have a right to expect greater consolation than that to be derived from his personal efforts in ballad-writing. Singers who are also composers will naturally give their own songs whenever and wherever they possibly can; and this must be accepted as one influence at work against the more frequent introduction of good music into the concert-rooms.

It will surely be admitted that the native school boasts of many young sopranos, whose names are constantly seen in matinée programmes, but almost invariably in connection with one or two songs, which are made to last for a season, and which are repeated everywhere without the least apparent compunction. A fair-haired English Miss (all honour to her for despising the Mdlle. apostasy), begins the season with vocal reflections on the blessings which follow a "Genial vernal shower;" continues in precisely the same strain, and carols on to the end of the fashionable months, without advancing any new theory whatever. All this is infinitely monotonous, infinitely inartistic, and infinitely damaging to the interests of music. From the German sopranos we cannot get the lovely songs of Schubert and Mendelssohn, but are obliged to put up with vocal valses, none of them comparable with Venzano's, which poor Madame Gassier sang so well. The best songs, either English or foreign, are unfortunately not those ordinarily met with at concerts, and the complacency with which artists pass over, neglect, and contemptuously ignore the thousand good compositions within reach, and waste their talents on inferior songs, is to be sincerely deplored.

A *résumé* of recent musical events will, of necessity, be brief. Mr. Alfred Mellon at Covent Garden (for during the reign of Harlequin the old name of the theatre may be spoken), has clearly proved that anything will do as a prelude to a gorgeous pantomime. M. Emile Jonas's *Avant les Noces*, called by Mr. Gilbert à Beckett, the English librettist, *Terrible Hymen*, is about as vapid and meaningless a trifle as the English public were ever called upon to tolerate. But two persons are concerned in rendering M. Jonas's inspirations: Mdlle. Linas Martorelli plays Marie, a bride elect, and Signor Gustave Garcia, Pierre, the stronger vessel, on the road to matrimony. Pierre is decidedly weak-minded, and Marie the reverse. The fun (save the mark!) consists in a change of costume, and poor Signor Garcia is in vain called upon to be comical in his handsome companion's drapery. Pierre speaks broken English, and this does not improve the situation. Signor Garcia sings well, and so does Mdlle. Martorelli; but both are out of place in *Terrible Hymen*, which, fortunately, takes little more than half an hour in representation. Of the *Forty* charming *Thieves* we have nothing to remark except to be taken prisoner would inevitably be to renounce the respectable world, and join their band. Mr. Tom Hohler made his *début* as an oratorio singer in *Elijah*, at the Sacred Harmonic Society's concert in the last month of the last year. Mr. Hohler had a cold, and undertook the tenor part at a short notice; but Mr. Hohler made a dire mistake in undertaking the music at all. He will have another opportunity of asserting his claims to be regarded as something more than a respectable tenor when Mr. Mapleson re-opens his magnificent theatre; but Mr. Hohler has so much to learn that his chances of distinction are very doubtful. That he has disappointed expectations; is beyond doubt, and that those expectations were raised upon totally false grounds is tolerably evident. The public tire of hearing a singer practise. The best thing for any one in need of such training is to go through it in private, and avoid theatres or concert-rooms during the course.

At a concert given by Mr. Henry Leslie at St. James's Hall, on January 5th, Mr. Santley sang, for the first time, a sequel to the "Stirrup Cup," by Signor Arditi. Sequels are seldom impressive, or at all equal to the original songs, and "The Gift and the Giver" is no exception whatever to the rule. On Saturday the 12th, a series of Promenade Concerts was commenced at Her Majesty's Theatre —of which more anon.

CAMOËNSIA MAXIMA (WELWITSCH).*

THE African continent, perhaps, of all the large continents, is, although unlike South America and many parts of tropical Asia, covered with dense forests of almost innumerable species, forming impenetrable masses of luxurious vegetation, the richest in vegetable wonders and curiosities; and the well-known adage, "ex Africâ semper aliquid novum," is, with the progress of exploration, continually being realized. Two very singular and interesting plants have already been illustrated in this work, viz., the *Welwitschia mirabilis* and the *Tree-Aloe;* and, to recall some other remarkable forms, the branched Palm (*Hyphœne Thebaica*), the *Baobab* (*Adansonia digitata*), and the thick-fleshy-stemmed vines (*Vitis Bainesii* and *V. maeropus*)

* Dr. Welwitsch, the celebrated African traveller, who collected this plant and from whose specimens our plate was taken, had promised to furnish us with an article upon it; but, unfortunately, he has been by indisposition prevented from so doing.

might be mentioned. Our plant, however, is not from the arid region characterized by the above-mentioned varieties of the vegetable kingdom, but from the high elevated forests of the Golungo Alto, in Angola, where, according to Dr. Welwitsch, it adorns the loftiest trees on the margins of the forests, causing the traveller to pause in amazement before its grandeur. It may truly be called the queen of the Leguminosæ or pea-flower family, of which it is a member, outrivalling as it does in the size and magnificence of its flowers all its relations from all parts of the world. Even in Australia, where, in some districts, this family is the prevailing feature, and is, in proportion to the other families, more largely represented than in any other region of the globe, only one, *Clianthus Dampierii* (now frequently seen in our green-houses), whose flowers are infinitely smaller, though more brilliantly coloured, can vie with this noble plant. It is to be sincerely hoped that an opportunity may soon occur of introducing it; and this difficulty once overcome, it would spread rapidly throughout the country, for members of this family are, as a rule, easy of cultivation and propagation.

The position assigned to this genus in the family by Bentham, and Hooker is in the Sophoreæ, distinguished from the neighbouring tribes by having not more than ten uncombined stamens. The well-known *Sophora Japonica* of our gardens, a large ornamental tree with fern-like leaves, is the typical genus of the tribe. Camoënsia of itself forms a subtribe with three leaflets on each stalk, a broad upper petal, narrow distinct lower petals, and numerous ovules. The following is a popular description of the species represented on the plate. A tall, smooth, climbing shrub, with drooping branches; leaves on stalks about two inches and a half long; leaflets of the leaf almost destitute of stalks, about four inches long and one inch and a half broad, margin uncut; flowers in pendulous 6-12 flowered racemes, ten inches to a foot in length; calyx, or outer covering of the flower, six inches long, with its segments turned backwards; petals white, bordered with gold, the upper one much larger than the others. The ripe pod is about the size of that of a broad bean, but with a thicker and harder shell. The plant is reduced one half in the plate.

One other species only of the genus is known also from tropical Africa, but nearer the equator, and a very handsome plant, but falls into comparative insignificance by the side of its more showy congener.

Not long ago a coloured drawing of Camoënsia was shown at one of the South Kensington Horticultural Society meetings, and a hope expressed that ere long it might be introduced to our conservatories: it is to be desired that it may.

W. H. F.

MUSIC ABROAD.

As the old gentleman, according to the fable, discovered very, very long ago, thanks to the donkey which he could neither ride, drive, nor lead without exposing himself to the reproaches or incurring the raillery of the persons he met upon the road, there is certainly no pleasing everybody, or, to put it in a forcible, though somewhat familiar form: "what is one man's meat is another man's poison." As a rule, when the Viennese have nothing else to do, they abuse the management of the Imperial Opera-house for not providing sufficient novelty. Now they are absolutely finding fault with it for supplying them with that commodity. Sig. Verdi's *Ballo in Maschera*, or *Maskenball*, as it is entitled in the Viennese playbills, has been produced at the Kärnthnerthor Theater of Vienna, and a number of foolish individuals immediately raise a cry that an act of leze-majesty has been committed against German art; that a wrong has been inflicted on the "national" opera. For our own part, we certainly consider the management acted very wisely in enriching its German operatic repertory with a work which has everywhere proved so successful as *Der Maskenball*. Whether that work satisfies all that critics are justified in requiring, is a question that must, probably, be answered in the negative. But in the domain of music, more, perhaps, than anywhere else, novelty is indispensable. The number of really classical operas, and of operas traditionally so called, is very far from being large enough to constitute an entire repertory; the consequence is, that new works must be added to the best among the old ones. When any particular period, like the present period in Germany, proves unproductive in the way of operatic *chefs-d'œuvre*, that which is relatively best must be picked out, and the public content themselves with it. This standard of merely relative excellence is the only standard applicable to the German lyric stage at the present moment, and critics will have to adopt it, even against their inclination, if they would exercise their functions fairly and with advantage to the cause of art. So much in answer to the assertion that *Der Maskenball* is not a first-class production. With regard to its being composed by an Italian, those musical patriots, who, on that account, object to its figuring in the German list of the Imperial Opera-house, forget, probably, that, for the moment, Germany cannot point to any living operatic composer of any note. Granting, for the sake of argument, that Herr Richard Wagner ever composed an opera worth hearing, even that gentleman's warmest admirers will hardly deny that the last specimen of the kind from his pen was his *Lohengrin*. All that has followed it has been a series of abstruse experiments, without any vitality upon the stage. Yet, at the present date, Herr Richard Wagner is the sole representative of German composers with a reputation abroad. Whatever may be the failings and shortcomings in the more recent operas by Verdi and Gounod, these gentlemen are undoubtedly the most talented among existing operatic composers. It is not simply to a love of what is foreign, to a mere caprice of fashion, that they owe the position they have achieved in Germany. Of all the German operas produced during the last twenty years, the most bigoted admirer of the country that gave birth to Mozart and to Beethoven, to Meyerbeer and to Mendelssohn, would be sorely puzzled to adduce a single act equal, in melodic invention and dramatic effect, to the second or third act of *Faust*; the fourth of *Il Trovatore*; the third of *La Traviata*; or the second of *Un Ballo in Maschera*. This may be mortifying to German pride, but it is the truth. The reader must not, however, conclude, from such a state of things, that German composers have been, or are idle. On the contrary, they all burn with eagerness to achieve theatrical triumphs, and their zeal in composing operas might be taken as an example

of industry even in an ant-hill. At its numerous "Court" and "Municipal" theatres, or theatres supported by the reigning sovereigns or the Corporation, respectively, Germany has, perhaps, produced, during the last twenty years, five times as many new operas as France, and at least as many as Italy in the same period. These said German operas, on their first representation at Munich, or Leipsic, or Darmstadt, or wherever they first beheld the light of the lamps, are greeted, as a matter of course, with shouts of applause by local musical patriots, and recommended by the local critics to the world at large as great and effective novelties, which cannot fail to become exceedingly and universally popular. Nearly all, however, meet with a decidedly cold reception in the very first town where the manager is bold enough to try them. Even in the fortunate locality where they were produced, they survive their first triumph for but a strangely short time. Despite the acquirements and skill, despito the labour and enthusiasm that characterize these scores, the utmost they achieve is a *succès d'estime*. The reason of this is, almost invariably, to be found in the want of talent—either creative musical power generally, or dramatic power more especially—on the part of their composers. It is undoubtedly Verdi's talent, his energetic and well-defined talent, which gives him the superiority over so many more highly accomplished German composers, who, as mere musicians, must certainly be ranked above him. Let Verdi's operas be for ever banished from the German stage, provided modern Germany can fill up with something as good, the void which would be thus created. Until it can do so, however, German art-bigots should cease reviling those persons who take a pleasure in the Italian *maestro's* productions, in default of anything better. Even in his most careless works, Verdi always has some happy thoughts peculiar to himself; and his broad, but sure touches, frequently invest the dramatic situation with a degree of warmth and power, to which the most learned and most deeply calculated turns of modern German composers never attain.

With regard to Verdi's *Maskenball*, it may not be generally known that Scribe's libretto, *Gustave, ou le Bal masqué* (on which Sig. Verdi's book is founded), was originally intended for Rossini, who was charmed with it. Eventually, however, satiated with fame and tired of work, he left Paris without having written a note of the music. Scribe then offered the book to Auber, who at first thought the plot "almost too dramatic." As we all know, he afterwards composed on it one of his most graceful and popular scores. M. Véron, under whose management *Gustave* was produced, says that it was nearly a failure on the first night, owing to one trifling fact, on which no one had bestowed a thought. The characters, it appears, were properly dressed in the *Roccoco* costume of the time of Louis XV., a costume better adapted for light pieces than for serious ones. The celebrated Mdlle. Mars had long before refused to play tragic parts in this dress, because she knew, by sad experience, that any exhibition of emotion was followed by an avalanche of hair-powder, which infallibly provoked the mirth of the audience. The singers in *Gustave* soon perceived that they dared not allow their feelings full scope. They were stiff and formal, instead of being warm and impassioned, and moved about under the constant dread of being interrupted precisely in their best scenes by peals of laughter. This naturally lent an icy coldness to the performance, and nearly ruined the opera. On the next night, hair-powder was banished from the Swedish court—at least on the French stage.

Many persons have expressed surprise that Verdi should have chosen a subject already used as an operatic *libretto*. He has only followed a plan at one time exceedingly common in Italy. Indeed, less than a century ago, it was a regular thing for several composers to set the same book. There is not, for instance, a single book written by Metastasio which has not inspired half a dozen musicians. Many composers, like Hesse, for example, even set the same *libretto* over and over again. The practice in question, which, however, has become less common in Italy for a long period, though it has never been entirely discontinued, sprang from the little importance attached to the words, and the absolute superiority attributed to the music. What a different view is taken of the matter by the French. While in Italy, a *libretto*, after being once set to music, becomes common property, it belongs, in France, to one composer and one theatre. Germany follows in the footsteps of France. The system of recomposing a *libretto* which has already inspired a musician of any note, possesses, perhaps, as a set-off against great disadvantages, only one advantage: it urges each new composer to extraordinary exertions. If he would achieve any success with his second-hand subject, he must not simply equal, he must surpass, the first composer, and drive him entirely from the stage. Voltaire's celebrated maxim, "Il faut tuer quand on vole," is particularly applicable in this case. Two settings of the same text cannot well subsist side by side upon the lyric stage. Rossini's *Barbiere di Seviglia* drove away Paisiello's once popular work; Donizetti's *Elisir* threw Auber's *Philtre* in the shade; while Donizetti's *Burgomaster of Saardam* had to yield to Lortzing's *Czaar und Zimmermann*. In the above cases there is nothing to be said; the victors have so completely excelled their predecessors, that no one, probably, would desire to restore the latter to their original supremacy. But this is not always the case; it sometimes happens that, because more modern, or stronger in certain effects, one opera has crushed an older one, the loss of which cannot be contemplated without regret. There have been two such instances lately; Gounod's *Faust* has shelved that by Spohr, and Verdi's *Ballo in Maschera* eclipsed Auber's *Gustave*. At the Kärnthnerthor Theater, the former work was exceedingly well played and sung by every one concerned. Mdme. Dustmann was exceedingly good in the part of Amalia; Fräulein von Murska made a decided hit as the Page Oscar, especially in the third act; Herr Walter, as Count Richard, was no bad substitute for Graziani, who played the part during the Italian season; and Herr Beck gave more than usual importance to the prominent part of René. An interesting revival at the same theatre has been that of Boiëldieu's famous opera *Le Petit Chaperon rouge*, or, in German, *Rothkäppchen*. This opera is already half a century old. Very few modern opera-goers know much concerning it, and therefore a word or two about it may not be unacceptable. Despite the title, the equivalent of our own *Little Red Riding-hood*, the plot has nothing in common with the old fairy tale, save a distantly figurative relationship. Rothkäppchen is in the opera an innocent peasant-girl, possessing in her red hood a sure talisman against any attacks that unprincipled men may make against her. There is no actual wolf lying in wait for her, but a bright specimen of the allegorical species, in the shape of a certain Baron Rudolph, a practised and consistent *roué*. For him it is as easy a thing to conquer girls' hearts as it is for Red Riding-hood to be virtuous, seeing that he also possesses a talisman, a ring so brilliant that it completely dazzles, bewilders, and overpowers every girl who beholds it. The Baron waits for Red Riding-hood in the forest, as she is going to visit an old hermit. But the power of the ring is utterly annihilated by the red hood. Wild with fury, the Baron hastens to reach the hermitage, where, disguised as the Hermit, he again awaits the maiden. Her position is now growing rather perilous, when the real Hermit enters; recognizes in Red Riding-hood a long-lost niece of the Baron's, and unites her to Count Roger, who, clad as a shepherd, has already won her heart. The great simplicity of the plot, and the utterly needless infusion into it of the superhuman element, are rather at variance with modern taste; that mongrel being the Hermit is an especial nuisance; the audience tolerate him, nay, perhaps, they rather admire him, when he passes at the back of the stage—like Zamiel from *Der Freischütz* turned virtuous—on every occasion that vice threatens virtue; but when, in the last act, he becomes personal and sentimental; when he bewails his lot and expresses a fervent wish that he may speedily die, there is not, probably, a single person present who, if he could, would not see the worthy and venerable bore's desire instantly gratified. Boiëldieu expended several years of ceaseless labour upon *Rothkäppchen*. But he cannot have regretted it, for the success of his work was as lasting as it was

triumphant. Still, everything here below has an end, and at last the magic hood began to be somewhat threadbare. At the present day, the music has lost the magical power it once exercised; for the Europe of 1867 it is, with the exception of a few pieces, tame and a trifle wearying. It is a strange fact, however, that the first person to degrade *Le petit Chaperon rouge* from the proud position it occupied on the French stage was no other than Boïeldieu himself, who, with *La Dame blanche*, brought out seven years after *Le petit Chaperon*, surpassed all that he had ever done before. That a composer should, in his fiftieth year, produce a work superior to any he has previously given to the world, is certainly a noticeable phenomenon. Rossini's last opera, *Guillaume Tell*, is a most striking instance of this; but then in *Guillaume Tell* Rossini's style underwent a complete transformation. In *La Dame blanche*, on the contrary, Boïeldieu remained perfectly true to himself and to his style, only his fancy was richer, warmer, and more active than it had been at any other epoch. His music, too, was, for the first time, characterized by its geniality, whereas it had previously been distinguished simply for its good taste and gracefulness. And to what was this remarkable change due? To the influence of Rossini, whatever French critics may say to the contrary notwithstanding. It was precisely between 1818 and 1825 that France, after so long opposing and decrying Rossini, began to acknowledge his genius, which gradually but surely subjected France to its power; and there is not the slightest doubt that Boieldieu, like less-gifted men, was unable to withstand the charm exercised by the great Italian master. At the Kärnthnerthor Theater, *Rothkäppchen* has not been a brilliant triumph. But then it requires not only to be well sung; it must be well acted also; and, unfortunately, good acting is something of which, as a rule, German operatic singers are supremely ignorant. ——M. Hector Berlioz has been to Vienna to superintend the production of his *Damnation de Faust*, which went off with great *éclat*. The chorus and orchestra, conducted by Herr Herbeck, consisted of four hundred performers. Mdlle. Bettelheim was Margaret; Herr Walter, Faust; and Herr Meyerhofer, Mephistopheles. For the words in the Chorus of Demons, who employ in the original version a language known only to themselves and Beelzebub, others were substituted belonging to an earthly, and, therefore, more prosaic idiom, as some apprehension was felt lest, if this were not done, the risible faculties of the Viennese would be exposed to an ordeal which they would have some difficulty in undergoing. A grand banquet was given by M. Berlioz previous to his departure. Another artistic celebrity, also, has lately visited the Austrian capital. We allude to Fräulein Mary Krebs, whose playing has fairly taken the Viennese by storm.

Perhaps there is, at the present day, no art institution in Europe, that is, in the whole world, where so much laudable activity is to be found as at the Royal Opera-house, Berlin. The company is so strong, that not only is the management enabled to give performances every evening, but we may with truth affirm that every performance is at least worth hearing. As a specimen, let us take a week at hazard, and we find that on the Monday there was *Der Freischütz*; on Tuesday and Sunday, *L'Africaine*; on Wednesday, *Rienzi*; on Thursday, *Stradella*; on Friday, *Le Nozze di Figaro*; and on Saturday, *A Midsummer Night's Dream*, with Mendelsshon's music. Among the artists engaged in these *chefs-d'œuvre* were Mesdames Lucca, Harriers-Wippern; Fräulein Börner, Frieb, Grün; Herren Wachtel, Niemann, and Betz. The Berliners are proud of their Opera, and they have reason to be so. There has not been any positive novelty in the repertory, but Mozart's *Zauberflöte* has been played for the three hundredth time, with "entirely new scenery, dresses, and decorations," to adopt the time-honoured form of expression peculiar to London playbills. The performance was regarded as a kind of art solemnity, and everything done by the management to render it worthy of the immortal music. Before the curtain went up, a paper containing a mass of interesting information regarding the opera, such as the names of all the artists who sang the principal parts at the Royal Opera-house, Berlin; the dates of the various representations of it there, &c., was distributed gratis among the audience. The scenery was magnificently painted by Herren Gropius and Lechner, and the costumes were models of refined taste. Advantage was, moreover, taken of the great progress in the stage machinist's art to impart additional effect to the fairy portion of the story. All persons concerned—leading artists, chorus-singers, and musicians—exerted themselves to the utmost, and with its three hundredth performance *Die Zauberflöte* may be said to have entered on a new career of success and popularity. There has been no lack of concerts, and very good concerts; but they do not call for any particular notice.

Der Freischütz is said to be a very great success at the Théâtre-Lyrique, Paris. It may not be generally known that this opera was first introduced to the Parisians in 1824, at the Odéon, and performed one hundred and forty-two times in the course of one year, though very nearly proving a complete failure on the first night, in consequence of a series of ludicrous blunders and unfortunate *contretemps*. The first tenor was so hoarse as to provoke the continuous hilarity of the audience, and the Hermit sang so out of tune that the curtain had to be dropt before the opera was concluded; then the *mise-en-scène* was something marvellous. In the first act, where, according to the French version, the fortunate marksman has to shoot a dove, the unlucky carpenter charged with this part of the "business" let fall, instead of it, the eagle or vulture, which Max brings down with the charmed bullet he obtains from Caspar. Our readers may imagine the hilarity of the audience at beholding, instead of a delicate dove, a misshapen feathered mass, more like a turkey-cock than ought else, fall upon the stage like a lump of lead. The manager, mad with passion, could hardly be restrained from assaulting the offending carpenter. At length he was mollified, and told the man that the vulture was not to appear till the scene between Max and Caspar, and moreover, that it ought to flutter about a little before sinking finally to the ground. Fully resolved to carry out these instructions to the very letter, the carpenter procured a long piece of string, and fastening his plumed monstrosity to it, waited patiently above the stage, for Max to fire. At last, the long-expected shot was heard, and the carpenter slowly let down the vulture. He kept swaying it, however, so long to and fro, that Caspar, who has to stick one of the feathers in Max's cap, could wait no more, but, jumping in the air, seized the bird by the tail, and forcibly pulled it towards him amid inextinguishable shouts of laughter from all parts of the house. The hundred and forty-one representations which followed this first one must not be entirely attributed to enthusiasm for the music. There were very many persons who could never see, or rather hear, anything in it, and a certain celebrated composer even went so far as to assert that all that was requisite to manufacture an opera of this kind, was to dip a camel's-hair brush in ink, and then spurt the latter over ruled music paper. The "Huntsman's Chorus" became, nevertheless, for Paris, what the "Bridesmaid's Chorus" was for Berlin; and we know it drove Heine from that capital. In one French paper of the period there was an advertisement for a man-servant who did *not* whistle the "Huntsman's Chorus." In 1835, M. Crosnier produced *Der Freischütz* at the Opéra Comique, where it was played sixty successive nights. In 1855, it was brought out by M. Perrin for the first time at the Théâtre-Lyrique, and enjoyed a run of one hundred nights. Among the novelties promised at this theatre may be mentioned *Deborah*, words by Plouvier, music by Demin Duvivier; *Sardanapale*, words by Beck, music by Joucières; *Cardillac*, words by Nuitter and Beaumont, music by Dantresmes; and *Roméo et Julie*, by Gounod.

The great attraction at the Italiens is still Mdlle. Adelina Patti, who, luckily for M. Bagier, has recovered from her late indisposition, and resumed her parts in *Rigoletto* and *L'Elisir d'Amore*. Pacini's *Saffo* has been revived for Mdlle. Lagrua, but it has not proved a success — Herr Joachim has been playing with immense success. He is the lion of the moment in all musical circles—the rehearsals of *Don Carlos* are being actively continued at the Grand Opera, under the direction of Verdi himself.

REVIEWS.

The Autobiography of the late Salmo Salar, Esq. Comprising a Narrative of the Life, Persoual Adventures, and Death of a Tweed Salmon. Edited by a Fisherman. Day and Son (Limited), London.

PROFUSELY as the subjects of salmon-fishing, salmon-breeding, and salmon law have been written about for many years past, the ingeuious author of the little work before us has contrived to treat them in a novel and most attractive manner. His pages, which are clearly the result of sportiug experience, careful study, and love of uature, profess to record, from dictation, a salmon's personal experieuces from the egg to the fatal landing-net, and present the fish's own views of the uatural history of his race, and of the ways aud works of his friends and euemies. The waterside sketches are the most diverting things of the kind that have come uuder our notice for many a day, and we need make no apology to the reader for extracting at length "The Baillie's misadventure iu search of 'Saumon Roe.'"

"I was lyiug listlessly one day in summer thirty feet beneath the surface, beyond the influence of the rapid stream above, iu the fathomless pool called The Pot, some half-mile below Mcrton Bridge, a boat, kept in its place by two light oars, floating above me, when the fragments of a conversation reached my ears, which by degrees absorbed my attention. A river-keeper was detailing to his employer the circumstances connected with the capturing of a poacher.

"'Ay, sir,' he said, 'but that saumou-roe is a sair temptation; mouy a guid mon has been beguiled by it. A' keu ane, a baillie; a' took him mysel.'

"'How came that? Tell us all about it,' was the reply.

"'A' was watching, mebbe six months syne, up in the Paviliou Water; the fish were thranging sair upon the spawning-beds, and weel a' kent they were thrang ou the bank abune the Whirlies. A' was hidden in the wee brae just abune the brig, and a' hadna' beeu there mebbe twa hour, wheu a' see a mon come daintily alang. Looking carefully this way an' that, an' seeing naebody, he just out wi' the gaff, an', screwing it on to the end of his walking-stick, stepped lightly into the water. It wouldna' be mickle abune his knee, an' the back fin o' meir than ae great fish was plain to be seen on the bank before him. 'Deed, but he wasted little time in selection, an' varra little ceremony he treated him with. In a second the gaff was in a puir half-spawned beastie, an', lugging her ashore, he started aff het foot towards Melrose. A' up an' after him an' for a weighty mou he made mickle running. When he saw me he dropped the fish, but no stopping to pick it up, a' just kept on under the railway brig, down the meadows, by Ailwand Foot, under Melrose Brig, au' there, as he was creeping up the steep bank, a' grippit hold of him ahint; a' grippit hard, an' he turned and said, "Sandy, lad! dinna grip sae hard; ye'll rive ma breeks." "Ay, Baillie," said I, "is that you? How cam' ye to do it?" And he said quite solemu-like, "Sandy!" he said, "it was neether the need nor the greed, but *joost the saumon-roe!*" "Ech, Baillie," a' said, "a' wadna' have believed it of ye, but it will be dear saumon-roe to ye." And sae it proved, for he was fined five pund, and ither harm cam' of it.'"

On the very high authority of "Salmo Salar" the author elects to differ here and there from naturalists aud sportsmen who have preceded him; but without a trace of the asperity which, singularly enough, is sometimes adopted in their prolusions by followers of the gentle art. On the vexed question, for instance, whether a parr is a salmon, or in other words, "when is a parr not a parr," he is at utter variance with the legislature, which has endorsed the opinion of many *savans* that the fishes are indentical. "Salmo" reports as follows, a conversation between two anglers, one of whom had hooked him during his "Smolt-hood," and then returned him more than half dead, limp, faint, and bleeding to his native waters.

"Although too weak to move, I retained my seuses, and heard the younger man say to his companion—

"'Why, John, what made you throw that poor little dead beast into the water again?'

"'Deed, was the reply, 'yon beastie's just a smolt, an' there's a fine for killing sich like.'

"'But you killed a parr just now?'

"'Ay.'

"'But you call this a parr?'

"'Deed, an' it's the fau't of those who gie the same uame to twa different fishes.'

"'What do you mean?'

"'A' mean that there's a wee fish ye killed just noo cae'd "the parr," au' it's a fish of itself, an' has melt an' roe as every ither fish has, an' ye'll find it in rivers an' burns, an' abune waterfalls, an' in mountain tarns, where no saumon ever yet was seen or could get, an' it's streekit an' barred all the same as the young saumon-parr; and it's just the confusion of ca'ing the twa by the ae name that's raised a' the fash that's made about the "edentity," as they ca' it, of the parr with the young saumon.'

"'Then you believe that the parr is not the young of the salmon?'

"'If ye ca' the young saumon the parr, the parr is the young saumon; but there's anither parr that has a better right to the name, an' it's a pity that twa fish should be bund to hae but ae name betwixt them.'"

The Salmon's way of accounting for his own rapid growth must be the last of our quotations.

"I have heard wonder expressed that so small a fish as the smoult should, in a few short months, increase from the weight of three or four ounces to that of frequently twice as many pounds. But where is the wonder? My mother, who was murdered on the spawning-beds before half her eggs had been deposited, weighed twenty pounds; the uoble kipper, her companion, half as much again. What would be the weight at more than two years old of a dog, offspring of parents such sizes? And was ever puppy fed as we were fed? No! *Fortes creantur fortibus.* Large animals and large fishes produce large offspring, and when I left the sea and again ascended my native Tweed in July, I weighed nearly seven pounds."

The portions of this now connected autobiography, which appeared from time to time in the pages of "Macmillan's Magazine," are already familiar to a large circle of appreciative readers, and we may safely predict that very general favour will attend their publication in a new form, and with important additions.

The Light Blue. A Cambridge University Magazine. Vol. II., No. 1. January, 1867. Cambridge, London, and Oxford. Rivingtons.

WE are glad to see that the conductors of "Light Blue" have successfully stemmed the perils of a first volume, and have entered upon their second in high spirits; a piece of good fortune which many a well-considered attempt to found a University periodical has not attained. The contents of Vol. II., No. 1, are varied and of promise. The political paper at its head, entitled "The Prospects of the Conservative Party," is judicious and carefully balanced. Mr. Swinburue's poetical excesses are ably and temperately treated, more in sorrow than in anger. A series of papers ou University topics is well inauguratcd by one on Cambridge classical honours, and the author has sufficiently at heart the fame of his *alma mater*, and the future of her sons, to pronounce that she might advantageously adopt

portions of the Oxford system. We look for good things from the writer of "Walter Boothe," a new serial story, which, it strikes us, will develop interestingly. The Book Notices, and the carefully edited University Chronicle, are not the least valuable features of a magazine, whose career, judging from the specimen under notice, will be watched with interest by Cambridge men both young and old.

A Century of Sonnets: Lines on the Burns' Commemoration of 1859. *The Funeral of Canning, and other Verses.* By Jacob Jones, author of "Rural Sonnets," "Inez de Castro," "The Anglo-Polish Harp," etc., etc. London: Alfred W. Bennett, 1866.

Mr. Jacob Jones is not afraid of challenging comparisons. When he enters the "spot of all spots," *videlicet* the "Shrubbery at Southend," he salutes it as wooing the "fav'rite sons" of contemplation, and proceeds to enumerate four of them, thus:—

"Again the knoll: where Milton might have dream'd.
* * * * *
Where Shakespeare might have drunk at Nature's shrine;
Or Collins nursed the ecstacy divine;—
Where first I sang, that 'Poland shall be free;'
Where later, for her woes, I shed 'a tear.'"

The last lines allude to two *Lyrics* by Mr. Jones, as he informs us in his notes. We are sorry to say that the information was needed. We are sorry, also, to learn that his *Iphigenia* did not obtain the *Newdigate* at Oxford in 1819: it is quite equal to many successful prize poems. This first gush of youth has been fairly rivalled by later effusions; and if any of our readers happen to look into Mr. Jones's present volume, they will probably not be disappointed.

The Savage Club Papers. Edited by Andrew Halliday. Tinsley Brothers.

This elegant production is creditable alike to the worthy Savages who have so well furnished forth its pages, and to the publisher who bore the charge of the adventure in his department, and thus enabled the Club to comfort speedily and substantially under her bereavement, the widow of a lamented comrade. The "Savage Club," so called after Richard Savage, is an institution of which, though many have heard—few, but the initiated—know much. It was perhaps as well that the ferocity indicated by its title should be authoritatively disclaimed for the body by the clever editor as follows:—

"It has been recklessly stated in a respectable journal by a writer, who knowing nothing of us has either been misled by false reports, or prompted to wild imaginings by the terrors our name, that we are a set of ill-conditioned malcontents, dwelling in the very centre of *Bohemia*; that our Club is a sort of literary cave of Adullam, into which the disappointed and the discontented have retired to set up their backs at every thing that is good and noble and worthy to be admired. There could not be a greater mistake. Nothing could be further from the truth. The qualification for admission to our Club is to be *a working man in literature or art*, and a good fellow. If a candidate answer these requirements he will be cordially received, come whence he may."

The list of literary contributors comprises the well-known names of T. Hood, T. W. Robertson, E. L. Blanchard, and a host of other gentle savages less familiar to the public. Thirty illustrations of more than average merit include specimens of Harrison Weir, Gustave Doré, George Cruikshank, Ernest Griset, and the last work of Paul Gray, whose premature death was a subject of the deepest regret to his friends. The typography, the paper, and the binding are all excellent, and the success which has attended the "Savage Club Papers," has rendered any vaticination of ours superfluous.

CAROLS AND VALENTINES.

By H. W.

"AND so now farewell to the mistletoe," said the king of Twelfth-night.

"Nay, let it hang a little longer," quoth the queen; "there are some berries left which look tempting to the poor girls. You and I, indeed, have had enough of it. We have pleased the youngsters for a night, and now our reign is over."

"Stay," said the king, "we cannot lay aside our majesty till daylight. We shall soon change the throne for the desk; but, meanwhile, play out the play, and let us speak of our princesses. *Wassel*, methought, filled the cup with the grace of her Saxon godmother, the daughter of Hengist: she stood before me like a second Rowena, saying, 'Wash-hail, my lord king!' and I pledged her, like a second Vortigern, my kingdom for a kiss."

Queen.—"*Wassel* always makes herself at home at a Christmas gathering, and I took care that her bowl should not be too potent. Yet still those boisterous lads, *Misrule* and *Gambol*, began to get unruly; and so I made *Wassel* empty her bowl and use it for snap-dragon. But I was quite sorry for poor Cis—I mean for Princess *Mince-pie*."

King.—"Surely *she* had dancing enough: did not all the boys ask for her?"

Queen.—"All, except the one she had counted upon—the son of good Mistress Horner."

King.—"We remember it now. Neighbour Jack must learn that blushing in the corner will never win our sweetest of princesses."

Queen.—"And then, in the middle of the dancing, that round little rascal, *Plum-pudding*, got in her way, and threw her over. I put her to bed in the sulks, poor thing. However, she will be all the readier for the dance another night."

King.—"She will find plenty of partners, we warrant." The king paused; and then continued, more gravely:—"Dance-music is good; it tickles the brain, and sends the blood tingling down into the feet: but it cannot touch the heart like that solemn pastoral music which accompanied the singing of our chorister boy, cousin Carol."*

Queen.—"Played by our guest in the mask with *V. H.* on it. Charming, indeed! But who was *V. H.?*"

King.—"This is the season of mumming, and we must not pry under the mask too curiously. A guest like *V. H.*, moreover, is welcome in any season, with or without a name. As for young Carol, his utterance was hardly smooth enough for singing. His younger brother, who will take his place next Christmas, promises (we are told) to have a voice better suited to music. Let us hope that the music may be as good." Again the king paused. "It is idle," he resumed, "to dream of fresh hollies, before the present ones have grown stale; but their time must now be limited."

Queen.—"They will all be swept away on the 2nd of February."

King.—"True, Candlemas Day belongs to the full festivity. But when the day arrives, mind you do your sweeping briskly. 'For look,' saith Herrick in his *Hesperides*—

'For look how many leaves there be
Neglected there, maids, trust to me,
So many goblins shall you see.'

A warning as 'grimly' as *Margaret's Ghost*, and well suited

* The speaker evidently alludes to the music of *The First Christmas Carol*, lately published by Robert Cocks & Co.—Ed.

to the 'grimly' month, when the sky is lead, the air is fog, and earth and water are mingled mud and ice. No holidays then; no pretty gifts for the maideus of the mistletoe!"

Queen.—"Please to remember poor St. Valentine!"

King.—"Avaunt! Cannot womankind get through the shortest month of all without the help of a lazy Romish saint?"

Queen.—"Your most gracious Majesty——"

King.—"Craves pardon of his queen. We were wrong in every way. We are bound to keep up our festive character; and, moreover, we have ourselves received many a kindness from the lord of filagreed note-paper. Indeed, a reminder has already reached us."

Queen.—"The present is so absurdly premature that I forget to be jealous."

King.—"There is no call for either frowns or laughter. We speak of designs that have been sent us for approval; nothing more. They were loaded with the perfumes that have often refreshed us in the bills of the Lyceum or the Haymarket; there was no mistaking the breath of Rimmel."*

Queen.—"We presume that they are sentimental."

King.—"From top to toe: no figures of fun, we assure you. They closely resemble those dancing flowers of the pantomime, that have more than half supplanted the old grotesques. The flowers are prettily drawn and coloured, and the French-looking fairies that wear them will please many a love-lorn youth. For ourselves, however, we have never sent a sentimental valentine."

Queen.—"Would it offend your royal ear if I sang you one of that description?"

King.—"By no means! It will tune our head for the pillow."

So saying, the king leant backwards in his easy chair, while the queen bent over her harp, and sang the following lay to a tune of the future:—

THE BOY BISHOP.

The maiden awoke in the silence of night,
For the depth of her chamber was gleaming with light:
She leant on her elbow,—a vision was there,—
A child with a mitre of gold on his hair;
A violet rochet this boy-bishop wore,
And the light seemed to flow from the crozier he bore.

But over his rochet were cheeks full of smile,
And under his mitre were eyes full of guile,
And roguish the laughter that mixed with his lay,
"Awake! for I bring thee first-fruits of the day!
'Tis a sigh,—from the heart of a poet it came;
And I charge thee to read,—in St. Valentine's name!"

The maiden arose,—but the nearer she drew,
The taller and fuller the bright vision grew;
And the mitre was changed to a crown like a king's,
And the rochet flew back into violet wings;
And, quickening the air with the breath of desire,
He leant on his sceptre—a cresset of fire.

She knew him—her master!—she knelt at his feet,
And faster, though softly, her white bosom beat;
And she gazed at the tablet he held in his hand,
But many may read it, yet few understand.
Oh, master of hearts, stoop again from above,
And again let her read it by torchlight of Love!

When the echoes of the queen's harp had died away, the king spoke, and his voice was like the voice of the Sphinx of Stodare:—"We see the maiden and her poet still sitting apart, after years of shilly-shallying; and they are exchanging valentines, not of honey but of gall."

Then the queen said, laughing, "Oh, false prophet! for they are sitting, happily united, under the long torch of hymeneal Cupid."

King.—"The words of your lay sounded familiar to me; but surely there should be more of them. The boy may grow as serious as you please at the end, but he ought to be a little more sportive at the beginning."

Queen.—"Even so; a few lines have been omitted."

King.—"I begin to think I can guess who sent them."

Queen.—"I am sure I know who received them."

The queen touched her secretaire, and a hidden drawer sprang out of it; and she drew forth a rose-coloured envelope. She turned towards the king. Their eyes met, and they both rose from their seats; and each seemed to hear solemn music in the distance.

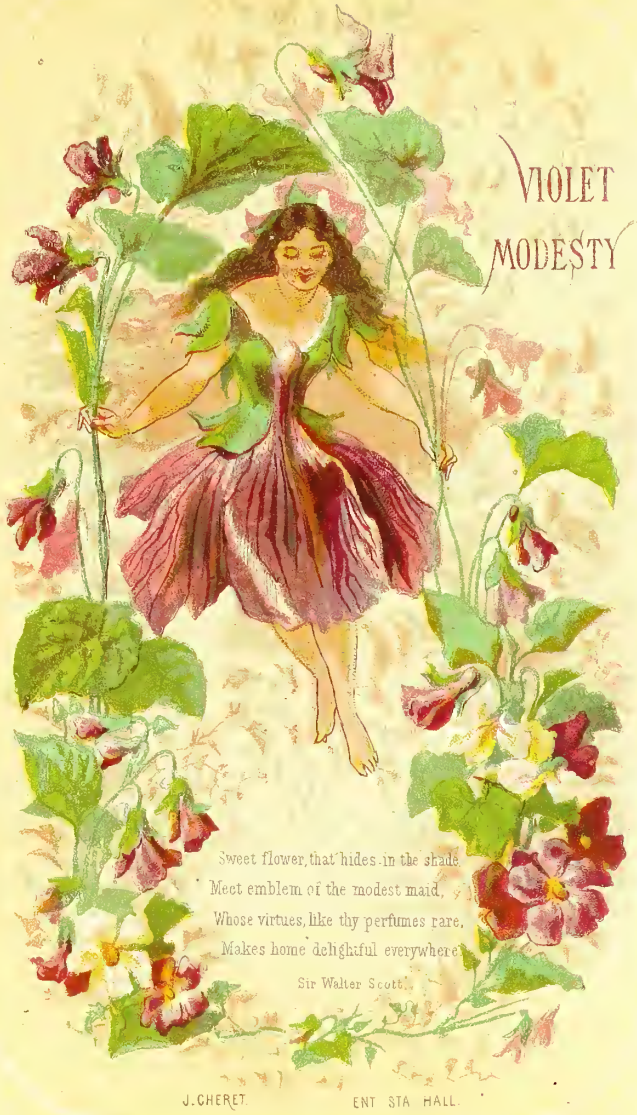
* Rimmel's *Animated Flowers*, drawn by J. Cheret, for specimens of which, as shown on the opposite page, we are indebted to Messrs. Rimmell.

OLLA PODRIDA.

On Water-Filters.—The sources of water-supply to London are at present subject to so much defilement, and it is likely to be so long before that evil is remedied, if ever it can be, that the study of the means of purifying drinking water—that is, pure water from a foul supply—is a subject of importance to all, and one on which medical men are very likely to be called upon to advise. The current number of the *Popular Science Review* contains an excellent article on the subject, discriminating the various merits of the moulded carbon filter, Danchell's animal carbon filter, Dahlke's silicated carbon filter, and Spencer's magnetic carbide filter. The article, which is well worth reading, is by Dr. Divers, a very able water-analyist; and although we could have wished for more definite conclusions, we can understand that there is a great difficulty in speaking very positively as to comparative merits. His final conclusion is, that

"In the magnetic carbide filter of Spencer, the cistern-filter of Danchell, and the silicated carbon filter, we may possess with tolerable certainty the means of freeing water from matters injurious to health. The uncertainty lies in the fact that the particular filter used by a person may be imperfect as a mechanical filter, and may have become inefficient as a purifier from dissolved organic matters, unless, as regards the latter point, it be a Spencer's filter, and have only been used with water of tolerable clearness (such as that supplied to London), and not largely charged with carbonate of lime in solution. Hence arises the propriety of having a filter examined after being placed in a house, in order to test its efficiency. This ought to be done by the filter-sellers." The verdict is most favourable to Spencer's magnetic carbide filter, but hardly so much as it deserves.—*British Medical Journal.*

In the time of the Romans Algeria supplied the gourmets of the Empire with truffles and some other gastronomic delicacies; at the present moment it serves amongst other things, as a valuable kitchen-garden for France, and supplies the citizens of that empire with new peas, potatoes, and asparagus, before even the hottest part of the south of France can get *les Primeurs*, as early productions are called in Paris, ready for the market. The peas and asparagus of Algeria are not so fine as those of France, especially the latter, for which French growers are renowned. But in February, when French asparagus is selling at the rate of twenty, thirty, and even forty shillings per small bundle, that of Algeria can be had for less than a third of the money. In the third week of February last year, Algerian potatoes were worth, in the central market of Paris, half-a-crown a pound, when those produced in France were twice that sum. At the same time, Algerian peas were selling in Paris at half-a-crown a pound, shells included; so that a good dish of *petits pois* at this season would have cost about two guineas. Algeria also supplies France with a large quantity of oranges—those of Blidah being very good—lemons, citrons, pomegranates, and dates, for all of which there is a considerable demand.


VIOLET
MODESTY
Sweet flower, that hides in the shade
Meet emblem of the modest maid,
Whose virtues, like thy perfumes rare,
Makes home delightful everywhere.
Sir Walter Scott.
J. CHERET.
ENT. STA. HALL.

DAHLIA
LOVELINESS
Thy beauty is as undenied
As the beauty of a star:
And thy heart beats just as equally,
What'eer my praises are:
And so long without a parallel
Thy loveliness has shone,
That followed like the tided moon,
Thou movest as calmly on.
Willis.
J. CHERET.
ENT. STA. HALL

NATURE AND ART

March 1, 1867.

BIZZ AND HER FOES.

By Mrs. S. C. Hall.

IN THREE CHAPTERS. CHAPTER III.

FIFTEEN years elapsed, and the memory of "Bizz and her Foes" faded into the indistinct past. Cooks, in their varieties, came and went: not many, though, for I generally manage to obtain good servants, and mine have been fairly contented with a good service. But Mary's shadow, as it were, would sometimes arise, and I wondered how she had fared in her new country. I thought how delightful were her quaintness and originality, and then remembered how I had never believed in her, and how *that* of itself had always given me a painful sensation: yet, with time, even that memory grew dim! The dear old Rosery too became a thing of the past; young artists, in poetry as well as painting, who had met and talked over their future, beneath the shadow of our grand old Mulberry, had grown into the glories of a present time, winning and wearing laurels that will be ever green in history. The greyhounds mouldered beneath the turf over which they had bounded; another race of cats sat on the stable roof, and defied the garden walls; another generation of boys swarmed in Steward's Grove, and rubbed their sticks against the garden rails. The Rosery, alas! was ours no longer; we had found a home more fresh and tempting, twenty long miles from London, having a lawn without blacks, and trees and gardens fresh and fair, where, moreover, there was abundant space for pets of all kinds—pets, that augmented in interest the longer they were known. To many people a dog is but a dog, and a cat a cat:—

> A primrose by the river's brim,
> A yellow primrose was to him,
> And it was nothing more!

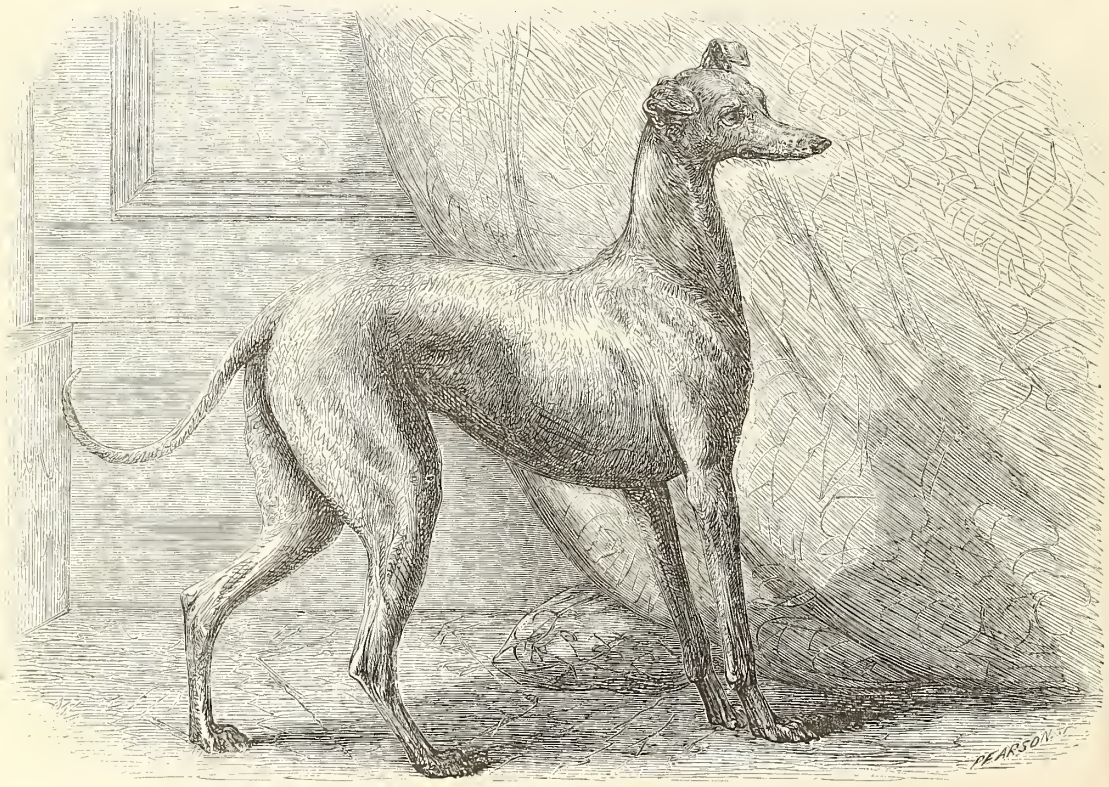
I pity those who can neither observe nor analyze the various shades of animal character. I have had dogs of all kinds; sometimes two or three born of the same parents, fed in the same way, equally caressed, and in like manner educated; yet each had its own peculiarities. The Italian greyhounds I have mentioned were as opposite in temper, disposition, and intelligence, as if they had been of separate and distinct species. Ninon was a grave, thoughtful, wise animal, gentle and attentive to every member of the family, but devoted to me, and to me only. She would remain in the library without motion during the five or six hours that I bent over my desk. No one could tempt her from my side; even if a strange cat looked in at the window; Ninon remembered I was not to be disturbed. Her eyes would flash fire at the cat and her beautiful frame quiver with excitement; but she would neither stir nor bark, unless I whispered, "Up, and at her." That was enough; at one bound she cleared the intervening chair, and once she charged so violently against a closed window, that the broken glass wounded her head severely. But the moment I wiped my pen, or placed it in the little vase of water kept for the purpose, she knew that my morning's work was done, and sprang about the room with manifest joy. She welcomed my friends with stately approbation and as much cordiality as she considered it right to bestow on any one except her mistress; but she disliked strangers, and kept up a sort of undertoned remonstrance at their being admitted. She was very particular as to dress, sniffing at anything that was old or shabby, and rejoicing if I put on what was new and handsome. She always examined herself in the cheval glass, and twinkled her ears about, as if she desired to see whether they looked best in repose or in action. She would literally smirk and smile at herself in the glass, showing her teeth, that were even and perfect as a row of oriental pearls, with evident pleasure: she would fetch and carry,—"die for the Queen,"—and take nothing out of the left hand. When spoken to, she held her head on one side with an air of consideration, and comprehended with wonderful sagacity whatever instructions were given. "Ninon, I am going to be very busy," sent her to her place on the rug;—and if I added, "When I have done, we shall go for a walk or a drive," she would look up with a peculiarly pleased expression.

But the creature so perfectly understood my words, that if I said "drive," though several hours had elapsed, she would spring up when my task was done, and, instead of rushing out, would wait patiently until the brougham came round, to take her place in her own corner. If I had promised her "a walk," she would cry at the hall-door until it was opened, then leap and spring over the lawn, as greyhounds only can leap and spring,—never losing sight of the door out of which she knew I should come.

Folly and Jessy were lovely to look at, exquisitely formed, with large, luminous hazel eyes. Ninon was larger, of the colour which is called "blue:" she treated these two favourites with great kindness and consideration, but never with the respect she manifested for a dear wise dog named Rose: in fact, she considered the two little greyhounds what poor cook would have called "born naturals." They received strangers with the same wild demonstrations of joy they bestowed on their friends; it was impossible to teach them any tricks, or induce them to notice any sound—except the dinner-bell; and I really think the only affection they felt was for chicken bones. The great honest Cochin-China cock craned his long neck at Folly's senseless gambols, and a grey bantam always drove Jessy screaming away from the wire-work that protected him and his glossy wives from intrusion, and through which that silly dog twenty times a day would endeavour to poke her nose. Now these three greyhounds had been educated and treated exactly alike, yet two were fools, and one was wise.

Ninon was such a noble creature that she was never displeased at any amount of caresses bestowed on her relatives; but she would not suffer them to accompany us in our road walk. The garden and the meadow—yes,—but not the road: she would look at me, and whine, and then drive them home. She knew as well as I did that they would spoil our walk, and that we could not enjoy anything, if we had to keep a perpetual watch on Folly's and Jessy's movements. There was a time when Ninon did not object to their company in a drive; but once Jessy sprang out of the window, and, being much hurt, yelled and screamed in my lap all the way home. I do not know what was Ninon's opinion of the accident, but she held down her head and looked ashamed and distressed, and she never would take another drive with Jessy. If Jessy went in, she went out; her resolution was made, and she adhered to it.

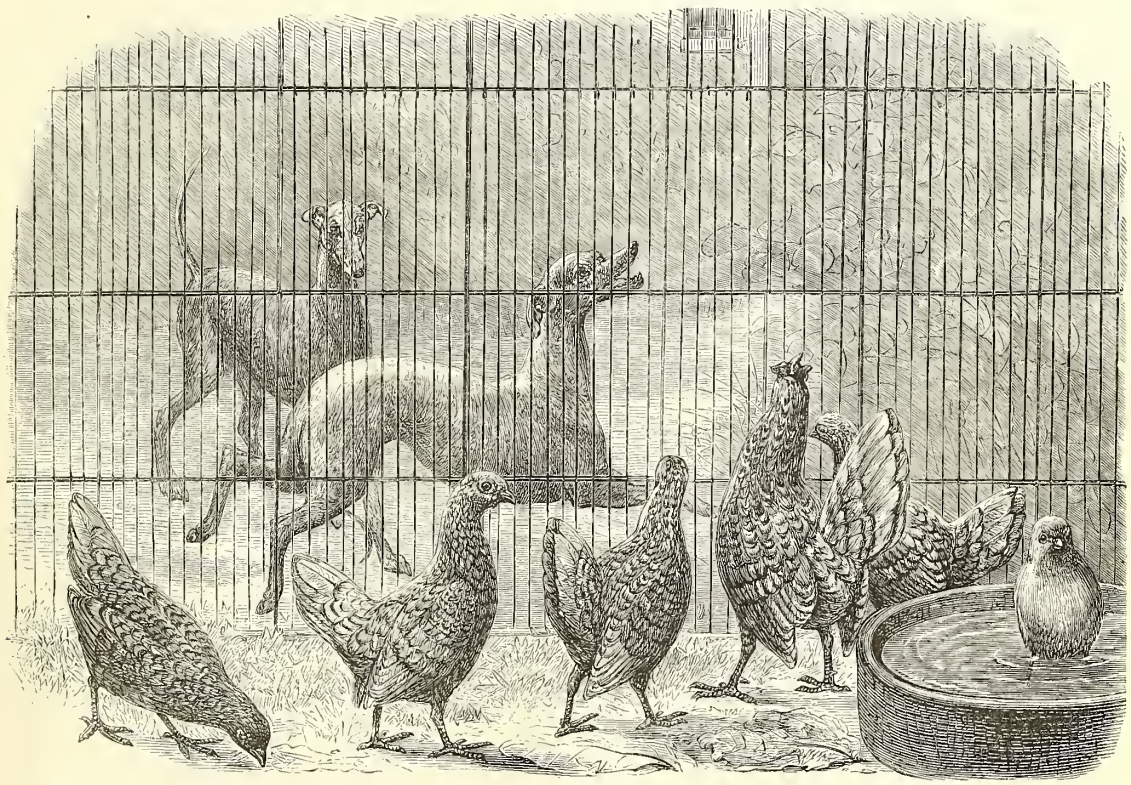
Besides being the most consistent of dogs, she was so honest! She would neither thieve, nor suffer others to do so. It was grand fun to set her to watch the breakfast table. Jessy and Folly, Mouton and Mince (the latter, two unprincipled Angora cats) were ever on the *qui vive* to steal what they could;—as to Jessy and Folly, they would devour anything from cats' meat to candles. So sometimes putting Ninon as sentry and "on honour," I watched the proceedings from outside. First came



Ninon's warning growl, which plainly meant, "take care;" then a rush on the part of dogs and cats to pillage, and on Ninon's to restrain; then at last a regular *mêlée*. Ninon, who occupied the middle of the table, rapidly dealing a snap here and a snarl there, succeeded pretty well in keeping off the cats, but the two greyhounds were generally too much for her; so the fear that she might lose her temper, and inflict a severe bite on one of them, always, sooner or later, brought me on to the field to terminate the skirmish.

There was no doubt that Folly was a greater fool than Jessy, for Jessy was sly: the latter had sufficient intelligence to be very cunning, stealing and hiding things she fancied, but Folly took what she desired openly, and never hid even a bone. They all differed from grand old Rose, a fine noble dog, such a dog as you make an out-door companion and friend of, in the country; who walks with you, sympathizes with you, and does all but talk, and gets through even a little of that, in its own way. She was a cross between a retriever and a Newfoundland. She would not kill rats herself, but she used to watch their haunts in the bank of the pond, and take a little, grubby, rat-catching terrier, whom she patronized (he was a visitor, not an inmate), to the holes, show them to him one after another, and leave him to do the dirty work himself. She loved her master dearly, and always endeavoured by her gentle, dignified caresses to attract his attention; but, like most of his sex, the knowledge of his power made him exercise it, and when he read under the shadow of our acacia trees, Rose would sit for ten or more minutes with her nose on his knee looking at him with her small dark eyes, patient as Grizel, and then, in addition to her nose, would put up her paw, and wait again. When these arts failed to woo the notice she coveted, she would go behind him, place her two paws on the back of the iron seat, and then in a moment snatch off his hat, and gallop with it to the other end of the lawn. That was certain to commence the game of the romps she loved so well.

Dear, faithful Rose! You ought to have passed your winters in the stable, with the horse you understood, or with the wee pony, who was not much bigger than your dear self: the winter kennel did not sufficiently protect you against the cold, and you became rheumatic, and died before your time; but we had happy days and happy rambles together, over Weybridge Common, and among the brushwood and hollows of St. George's blithe and pleasant hill. Other rambles we had nearer home, when the Italian greyhounds were taken for "change of air" to the Chertsey meadows, where the ruins of the fine old abbey can be traced beneath the waving grass, or up and about St. Anne's Hill, where I looked out for the proud castle of Windsor, while you tried hard to catch a hare, or even a rabbit; but they were too swift for you, my own old Rose! You grew fat and heavy while you ought to have continued slim and genteel. I loved you for the sake of her who gave you to us, and because you were like the



friend of my childhood—black Charger. Charger was once dreadfully mauled by the butcher of Carrick's big dog—and we thought he must have died. I considered myself very ill-used because my mother would not let me sit up with Charger at night: I cried myself to sleep, curled up like a cat in the window-seat, and fancied the sea moaned in sympathy with my sorrow! But Charger recovered, and then his steady friend and firm ally, Neptune,—a colossal Newfoundland, as large and in general as dreamy as a calf, a giant among dogs, who seldom barked, or ran, or wagged his tail, but lay "i' the sun in summer" on the square stone that topped the steps leading to the hall-door, and in winter, on his own particular mat in front of the old clock in the hall:—this great dog entertained the deepest feeling of revenge towards the dog that had so grievously ill-treated his friend, and when poor Charger was able to limp up the hill of Carrick, which was more than a mile from Graigue (the dear old home of my young days), Neptune accompanied him, cold and silent and stately as ever, step by step with his lame friend, and they soon discovered the great bull-dog, nodding in the sun before the butcher's house. Charger was a little in advance of Neptune, and when Bull saw him, he arose, and shook himself, and glared, advancing a step or two, as though to say, "Oh, it is you,—I will soon finish you, puppy." But Neptune stood between them, not suffering the bull-dog to touch his friend, and meeting the charge like a hero. The bull-dog was fierce and active, but independent of his great strength, Neptune's throat was protected by a brass collar, and his thick, shaggy coat was a natural armour of defence. The dogs fought like tigers, the bull-blood was thoroughly heated, and the Newfoundland knew the value of his weight and size; yet the odds would, for all that, have been dead against Nep, who was aged, while his antagonist was in his prime, but for the protecting collar. The bull-dog held on to it like grim death, wondering, doubtless, that his opponent was not strangled: both dogs were punished, but Neptune would have certainly closed Bull's fighting calendar, only that the fight was put an end to by the butcher and the smith,—the butcher anxious for the safety of his dog, and Mr. Bow, the smith, determined that Neptune should not be "kilt intirely." Charger, we heard, stood calmly at a distance, looking on: now he was not a dog to do that when his friend was spilling his best blood in his cause, if it had not been previously arranged between them, that Charger should keep out of the fray: it was the more remarkable as Charger was generally pugnacious, hearing the sound of battle afar-off, and rushing into the combat in true Irish fashion, without waiting to investigate the question of rights or wrongs. Neptune must have had great influence to compel his remaining stationary. The dogs were away the entire day, and when Nep was discovered with unmistakable marks of recent combat on his person, and Charger in the very act of licking his wounds, the household surged into great commotion. "Where had he been? Who had dared to hurt him? Charger and he couldn't have fought?" "No, Charger was as smooth as satin." The arrival of the smith, who was also somewhat of a dog-doctor, solved the mystery: he related the whole affair with eloquence and emphasis, and gave a sorry account of the state of Bull's shoulder, which was supposed to have been broken. It was well known how the brute had fallen upon poor Charger, so he had very little sympathy from our household; and Neptune's health was drunk that night in the servants' hall, with I fear more than three times three, the sentiment which accompanied the toast being—"May we all have as true a friend when needed!"

Generally speaking, if dogs are not sagacious, it is to be attributed to a defective education. Those who neglect to cultivate relations with the animal kingdom lose a great deal of what assists to cheer and invigorate life.

While my greyhounds and Rose, and a new importation, a lovely little white Lion dog of Malta (with various other beasts and birds), formed a very happy family at our country house, a puppy was given to me with the assurance that it was a beautiful Skye, a "Blue" Skye. Her rough little jacket was decidedly "foxy"—but my kind friend persisted in the assurance that she was a "Blue Skyë," all her relatives were "Blue Skyës;" and *she* could not fail to be a "Blue Skyë."

It was hoping against fact. Every day I looked at her, I trusted in her turning "blue;" but no, the fox deepened, and the hair grew fast and furious, hard, sticking-out hair. She certainly had beautiful eyes, and a lovely little round head, but it was far nearer akin to a spaniel's than to a Skye's: there had been a *mésalliance* somewhere. The short-rounded nose told a history, and some went so far as to stigmatize my "blue" foxy Skye as a "cur." This was hard to bear, for I always prided myself on the respectability and purity of my different canine families. I know "curs" are wonderfully intelligent and affectionate; and I have sheltered many a one. I once carried off a cur triumphantly from a conclave of boys who had broken its leg, and were debating whether it should be "swum," or "danced:" "swum" I am told means drowned, and "danced," hung. I carried it across Hyde Park at three o'clock, until we (doggie and I) got a hackney coach: poor, little, dirty, screaming thing! but when I laid it on my lap, and the creature looked up in my face, with such an appealing look, half agony and whole trust, I felt I could have carried half a dozen, if so rewarded. I cured that cur, but did not keep it: I found it a good home at our milkman's, and saw it frequently; and to confess the truth, the "blue" "foxy" Skye was a little like my long-ago cur of the "Long Water." I had not made up my mind what to do with her, when, with admirable sagacity, she placed herself! She adopted our excellent gardener: she fixed her affections on him, before she had quite shed her first teeth, and from that day to the present moment—and she is a very old dog now—Effie has never—I really may say never—left

him day or night. She had two strong passions: she loved her master, and hated donkeys. In the middle of the darkest December night, if a donkey, for whom its gipsy master opened the gate, trespassed on field or lawn, that dog would insist on her master's uprising and going forth in the darkness to eject the intruder. With wonderful instinct she would lead the gardener to where poor Long-ears was enjoying a late supper, and, had her strength but equalled her inclination, she would have torn him limb from limb. I must say the gardener returned her devotion, for a more indulgent master never lived; she grew handsome as she grew up, and her eyes were wonderful, so large and bright, but she never became "blue."

We passed seven happy years in that sweet valley of the Thames, and there is not a shadow on its memory! Latterly, Effie ceased to be annoyed by the donkeys; it so chanced that we did an act of kindness to a poor gipsy woman, who was stabbed (she said accidentally) while sleeping in her tent. The young surgeon of our village, with the tenderness and benevolence that belonged to his nature, saw her, and finding how much she required, came to us to help her. When she recovered, and before her party struck tents for other quarters, the gipsy woman, with her little brown baby in her arms, went round to those who had been kind to her, to thank them.

When she came to me, her great luminous eyes filled with tears, she kissed my hand repeatedly while kneeling at my feet,—

"The pretty lady," she said, "won't believe what the poor gipsy could tell her of the lines on this palm, which are so filmed over, hard though some are, and crossed too, my pretty lady, but *filmed* over, by God's blessing. Sleep sweet on your pillow, you and the good master, you have never lost hammer or nail, berry or brush, since you passed under your own oak-tree at the great gate, and you never shall, lady, nor pigeon or chick, duck or hen, no, not so much as a flower, my pretty lady: and more, neither mare nor foal, nor even the great ass with the mark of the Christian, my pretty madam, on its shoulders, will ever open your gate again to taste the sweet grass: so the little sharp dog and its big master may rest by moonlight, or starlight, or no light. Never again!—for your gifts to the poor gipsy woman, and your care, and the sunshine you brought into her poor tent, have circled round your house, and you need never turn key or bolt door, while here you bide."

Whenever that woman—Myra Stanley—and her tribe visited the green lanes of Addlestone, she always paid me a visit, as one lady would to another, not to tell fortunes or to beg, and certainly not to steal, though I think my poultry-pens were a great temptation to her; she always regarded them with wistful looks, and then as she turned away, invariably said—"But you never lose anything, and never will, never will, my pretty madam!" and we never did. After Myra Stanley's recovery Effie and her master rested in peace. No "donkey, mare, or foal" attempted to "crop the sweet grass by starlight, moonlight, or in the dark."

The memory of those sweet and happy years has taken me away from my story.

We had been at Firfield more than five years, when, rather at an early hour for visitors (though some, I confess, are wickedly inconsiderate, and think far less of breaking up a morning's pen-work than they would of breaking a teacup), the servant brought a large card into the library, "Mrs. Smith" engraved on it in large letters, amid a foliage of flourishes; there it was, "Mrs. Smith,"—plain Smith, without the aristocratic "y." The name is by no means uncommon; I heard the other day there are 407 "Mrs. Smiths" in Brighton!

"The lady told me to say," observed the servant, with the becoming gravity of a well-bred domestic, who never evinces sympathy with, or for, anything—"the lady told me to say it was Mrs. Smith and a box."

"Mrs. Smith and a box," I repeated.

"Yes, ma'am, that was the message."

Mrs. Smith, a well-developed female, handsomely dressed, but with a greater variety of colour in her garments than I consider good taste, stood in the middle of the drawing-room, a large square box with a prominent brass handle on the top by her side.

She looked at me, and I at her.

"Ah then," she exclaimed at last, "don't you know me, ma'am? Sure I'd know you among a thousand. God for ever bless you, me lady."

The unmitigated brogue, the soft voice, the loving expression of those large grey eyes, told me who it was, though the form was so increased in size and portliness.

"Ah, you know me now, ma'am, and you'll know her too, though she's not in it,—that is, the whole of her,—and quiet enough now, poor thing! only she has her foes still, the moths and the cockroaches stir her up, though I'm watching them constantly, bad luck to them!"

She pressed a spring, and down went the front and sides of the box, and there sat Bizz within the rim of her potato-basket, stuffed, poor animal, not with sheep's-heads, as of old, but with—I know not what! and certainly to great perfection: the split remained above the white tooth,—one eye was closed.

"Yes," I said, "if that open eye could but wink, it would indeed be Bizz to the life."

"She had a long life, and a happy death according to her kind, ma'am," said my ci-devant cook, while turning the box into a better light,—"and might have been alive now, only she hated niggers worse than rats or cats. I told her often they war her fellow crayshures, but she wouldn't mind me, and one day, she tried to take a bite out of a little nigger's leg, who was stealing yams—if she'd had a tooth in her head to do it with, he'd have remembered it—but, poor thing, she couldn't hould her grip, and he slipped away, and grinned at her, the little aggravating blackamoor! And the disappointment and the passion choked her; but her

time was up, and she died, as she had lived, in the cause of duty. Still she was, though only a dog, off the same sod as myself,—my mother's (the heavens be her bed!) present to me, when she was a fractious puppy,—but I didn't mind that,—she was made of the clay of the ould country! me own faithful friend! Often on the rowling sea, I thought of this day, when I should let you see the remains of her,—bring her to you, ma'am dear, to have a last look at her, just out of gratitude."

She stooped to pat the dog's head, and muttered the "cushla machree" over it so tenderly: it was strange to hear such a radiantly-dressed woman speaking with such an accent: it was all natural and right for "Mary" to have the brogue, but I cannot describe my perplexity when I looked at "Mrs. Smith," while her words rolled out in the richest Munster!

"The rats," she said, "the villains, they found her out on the passage; there's nothing escapes them murderin' ruffians of rats; one would think they had a spite against her; I don't know how they got into the cabin, but they did, and many a long night have I sat on the box, with a soda-water-bottle in my stocking ready for them, (oh memory of the 'fair green of Ballynatrent!') I shouldn't have saved a hair of her, if I had not watched over her day and night.

"I've been greatly blessed, ma'am; I'm married to as good a man, and as kind, as ever stepped in two shoes, an independent gentleman he is now, and I've been able to send new vestments to the priest of Ballynatrent, and had a tombstone put above my dear mother, that as long as a shamrock springs from the sod will tell what she was, and where she is, for I never rested until she *was prayed out*,* and I heard the end of *him* you knew about three years ago, come Candlemas. So I could come back without fear or trembling, and my master longed for the old country."

There was a pause; it was difficult to realize the transformation. Mrs. Smith busied herself with crumbling camphor on the remnant of the dog's tail which stuck out as usual "quite natural,"—the voice, the sweet, loving eyes! yes it was a reality, but not without romance. I do believe she had put on all the finery she possessed in the very exuberance of her desire to do me and herself honour. *Could* that enlarged woman, glittering in chains from which depended such "knobby nuggets" as it would have been dangerous to show in a crowded thoroughfare, in bracelets of astounding size, ear-rings of wreathed ferns, and in that unmistakable Australian brooch, composed of a palm-tree, and a tuft of such foliage at its base, as would have driven a botanist insane—could that woman, surrounded by such an atmosphere of wealth, and looking so solidly happy, and fresh, and rich, have been the cook, who denied her country! It was more like a trick in a pantomime, than the revival of old times. Yes, her position was evidently changed, and why should I quarrel with her accent?—her warm, earnest heart was clinging to the associations of her early poverty and struggles, cherishing the very skin of that battered old dog, and believing (God bless her for her belief in human sympathy!) that I should enjoy seeing the glitter of her prosperity, and the moth-eaten skin of what (and I mean no disrespect to Mr. Smith) she certainly loved best in the world.

I was too bewildered for some minutes to ask questions. At last I said, "We should be happy to see Mr. Smith, if at any time he visited the neighbourhood," and then I admired Bizz, and stroked her coat, and said how well the character of the dog was preserved.

"Aye, sure,—but she'd have grown out of your knowledge without the white tooth. I had *that* put in,—and indeed Mr. Smith has great patience entirely on account"—but at that moment Mrs. Smith caught sight of a juvenile cockroach, who was seated on the top of Bizz's very shiny nose.

"There's one of them!" she exclaimed, while making a plunge at the doomed insect, "to think of her foes keeping it up that way, when I may say she has no body, and no breath. You used to say, ma'am," she added reproachfully, "that Bizz made foes by her bad temper:—sure, there's no temper in her now, and they won't let her alone!"

It was a treat to look at Mrs Smith's face; there might be a little assumption of dignity, yes, *dignity* in her manner, carried out by her handsome presence, but the happiness, the simple, womanly happiness of seeing a friend, and being able to open her full, national heart to one who she knew would understand her, swept away all her pomposity. Looking earnestly into my face, and laying her solid fingers, cased in mauve kid, on my arm, she said,—"Ah, do now, ma'am, please to call me Mary, it would sound so sweet! there's no one calls me that now. Mr. Smith is so anxious to keep up my dignity, he always calls me Mrs. S."

Then she told me about her servants, and what her jewels cost, and dwelt lovingly and proudly on her husband's goodness and station; yet I saw she had something to say about him that hung fire, something that she could not quite frame words to disclose,—at last out it came,—"*he hated the Irish!*" Yes, it was quite true, "he hated them, he always said he'd never marry an Irishwoman; he told her so often."

"But," I said, "he *did* marry an Irishwoman."

A queer expression came over her face. "He does not know it," said Mrs. Smith.

"Not know it?" I repeated.

"Sorra a bit," was the reply.

I thought it perfectly unnecessary, yet I said, "Oh Mary, you should have told him."

It was now her turn to repeat, and she did so. "Told him! I shouted it at him, till I was a'most black in the face,—and plenty besides me did the same: good-natured mothers, who wanted him for their own girls."

"And he did not believe it!"

"He never heard it: he's stone-deaf, hasn't

* Out of Purgatory.

heard a sound these twenty years, poor dear man. He often says—'Mrs. S.,' he says, 'I'd die happy, if I could hear the sound of your sweet English tongue,—only once't,' he says, the dear, kind, innocent, good man."

"But you should have made it known to him somehow."

"Don't I know that? He should know it, but he doesn't, there's neither a black nor a white lie in it. I tould him hard and fast, and often enough, both before and since we were married. His cousin once't, out of a spite to me, wrote it down on paper that I was Irish, and Mr. Smith ordered him out of the house there and then!"

"But could not you write it?"

She crimsoned over cheek and brow in a moment.

"Oh, ma'am, sure if you'll remember you know I couldn't. Sure you might think of the milk-tallies, and the marks I made on the wall of the larder against the butcher's book. Sure, if I could write, wouldn't *you* have got a letter to tell you about poor Bizz? and the good fortune the Lord laid out for me, a poor, ignorant, half heart-broken girl! and it all came about through the fever Mr. Smith had, and none of his servants would go near him but me. Day and night I tended him for weeks, and when he got to be himself again, he made me Mrs. Smith, and taught me to talk on my fingers which I can do now famous. I think he'd die if he thought I was Irish, and I'm sure if he heard me spakeing this blessed minute, setting a case he was to the fore, he'd think it was French, or Italian, or German, I was talking, and where's the great odds? Sure, I hear it's the fashion now, for ladies and gentlemen to read, write, talk, and spell, every language in life except their own, and that's the cause (as I hear) of all the bad English that do be in books. They'll all have to be sent to Ireland, I'm thinking, to learn *raal* English; that is, the people that do be making the books, I mean,—and sure," she added with one of her sly smiles, "I wouldn't wonder if you made one out of

'Bizz and her Foes.'"

CEREMONIES OF THE GREEK CHURCH.

IN the most ancient part of the Kremlin at Moscow is an old sacristy, and there is kept the original vessel which brought the *chrism*, or anointing oil, from Constantinople, and which, by the orthodox of the Greek Church, was believed to contain a portion of the precious ointment used by Mary Magdalene. This vessel is a copper bottle or vase, silvered over and ornamented with mother-of-pearl.

In the same sacristy there are two large silver boilers and a third of larger dimensions, which were a present from the Empress Catherine; in these there is, during Lent every year, made, or consecrated, a quantity of oil as a chrism: this is done as a ceremony of great solemnity by the Metropolitan of Moscow, assisted by his clergy. The chrism is compounded not of oil alone, but of about thirty different ingredients—oil, and essential oils, white wine, gums, balsams, and spices,—and to the whole are added a few drops from the "alabaster," which is the title of the bottle of chrism from Constantinople. When the whole is duly prepared, and consecrated by the ancient forms and ceremonies, a few drops from the mass are again put into the ancient "alabaster," and by this practice, sixteen silver bottles, similar to the ancient one, are filled, and the original stock of precious ointment is duly preserved. This sacred oil is called "Mir," and these bottles are sent to the different bishops of Russia. It is used for the following ceremonies: the Emperor at his coronation is anointed with it; it is used at the consecration of all churches of the orthodox communion, and at the baptism of every orthodox Russian subject.

The ceremony of baptism, like all the ceremonies of the Greek Church, is very beautiful, and ought to impress those who go through its performance with a sense of its solemnity. The godfathers and godmothers proceed with the child to the church, and are met at the door by the priest: he gives the child the sign of the cross on the forehead, and pronounces the benediction, saying, "The Lord preserve thy going out, and thy coming in!" The sponsors present four lighted candles, which the priest puts upon the font; he then consecrates the water, by dipping the cross into it; he then, after the use of incense, leads the sponsors, with candles in their hands, in a procession round the font; having circumambulated the font three times, the sponsors give the name of the child in writing; the priest attaches the name to one of the images of the church, and laying it on the breast of the child, asks "whether the child believes in God the Father, Son, and Holy Ghost?" The answer "yes," is given three times, and the sponsors then turn their backs to the font, as a sign of their aversion to the next three questions, which are, "Whether the child renounces the devil? Whether he renounces his angels? Whether he renounces his works?" They have to answer to each question, "I renounce," and spit three times upon the ground, in token of malediction. On turning again to the font, they are asked by the priest "Whether they promise to bring up the child in the true Greek religion?"

A satisfactory reply to this being given, the priest puts his hand upon the child, and blows three times, saying, "Get out of the child, thou unclean spirit, and make way for the Holy Ghost." After this he cuts off four small locks of hair from four points, forming a cross on the head; these locks he wraps up in wax, and throws into the font; the priest takes the child, naked, and plunges it into the water three times, uttering the words of the Sacrament, "I baptize thee in the name of the Father, and of the Son, and of the Holy Ghost." Complete immersion is the practice of the Greek Church, so a pretty large font is necessary.

The ceremony of baptism contains two sacraments: the second is called the "Baptismal Unction." This is done with the sacred oil, which is prepared in the sacristy of the Kremlin, and which is believed to contain a portion—however minute—of the "costly pound of ointment." The child receives the Holy Ghost through the virtue of this baptismal unction. As this ceremony is always performed at baptism, it renders confirmation unnecessary in the Greek Church. The priest anoints the mouth, eyes, ears, hands, and feet, as well as the back and breast. The mouth is anointed, so that it may only speak that which should be spoken by a child of God; the eyes, that they may only see good; the ears, that nothing may pass through them to the mind but what is pure; the hands, that they may do no wrong; and the feet, that they may walk in the way of life. He then puts a grain of salt in the child's mouth, and in token of the hopes of purity, he dresses it with a clean shirt, and repeats the words, "Thou art as clean, and as clear from original sin, as thy shirt." A small cross of lead, silver, or gold—according to the means of the parents—is put round the infant's neck: this is carefully preserved, because the rites of Christian burial are denied to any who die without them. Sponsors are considered so nearly related, that they are not permitted to marry.

Marriage is also a very elaborate ceremony, and its celebration occupies a considerable length of time. Some details of the late marriage of the Czarewitch will convey a good idea of forms gone through, for they are exactly the same as those of the poorest individuals.

The Metropolitan and principal clergy of St. Petersburg came to the door of the chapel, there to receive the marriage procession. One priest held a candlestick with three tapers, which was so arranged that they produced only one flame; this was in token of the Three in One; another held a basin of holy water, and a bay-leaf to sprinkle it with; and the Metropolitan held in his hand a golden cross about ten or twelve inches in length. The bride and bridegroom were sprinkled with the holy water; they were then blessed by the Metropolitan, and each kissed the cross in his hand.

As a woman cannot enter within the enclosed place of the altar, a temporary altar is put up on the outside of the screen, for the ceremony of marriage to be performed. This is nothing but a small reading-desk, covered with cloth embroidered with gold crosses, and a copy of the four Gospels is placed upon it. The bride and bridegroom took up a position in front of this, with lighted tapers in their hands, and the officiating priest asked, "Alexander Alexandrowitch, hast thou a good and unrestrained will, and firm intention to take unto thee to wife this woman, Marie Feodorowna, whom thou seest here before thee?" The Czarewitch replied, "I have, most reverend sir." The priest again asked, "Hast thou not promised any other woman?" And the answer was, "I have not promised another." The same questions were put to the bride, after which came the benediction; then the deacon said the Ectinia, into which were introduced the following words for the occasion: "For the servants in God, the Czarewitch, Grand Duke Hereditary orthodox, Alexander Alexandrowitch, and the Grand Duchess orthodox, Marie Feodorowna, now joined together in holy wedlock, and for their salvation." A number of prayers were then repeated, and two crowns were brought on a tray; the priest took one, and, making the sign of the cross with it over the head of the bridegroom, said, "The servant of God, Alexander Alexandrowitch, is crowned for the handmaid of God, Marie Feodorowna, in the name of the Father, and of the Son, and of the Holy Ghost." The Czarewitch kissed the crown, and one of the Garçons des Noces held it over the head of the bridegroom during the remainder of the ceremony. A similar service was performed with the other crown and the bride, and it was also held over her head till the end. A benediction was then given—"O Lord our God! crown them in like manner with glory and honour." The crowns in this rite have nothing to do with the rank of the couple; crowns are used at every marriage ceremony. There was a slight difference in the two crowns, which may be worth noticing; that held over the bridegroom had on it the figure of Christ, while that over the bride had a figure of the Virgin. The "Prokimenon" now follows,—"Thou hast put crowns of precious stones upon their heads; they asked life of Thee, and Thou gavest them a long life; for Thou shalt give them the blessing of eternal life; Thou shalt make them glad with the joy of thy countenance." Then comes the "Epistle of the Office," Eph. v. 20–33. The priest then reads the Gospel; that chosen was the second chapter of St. John's gospel, which relates the marriage in Cana, ending with the 11th verse. An anthem, "Glory be to Thee, O Lord, Glory be to Thee," is sung before and after the Gospel. The "Common Cup," containing wine, is now given by the priest to the bride and bridegroom, who each drink out of it three times in remembrance of the marriage in Cana.* Up to this point of the ceremony the contract may be broken off, but now comes the most important part of the rite, which makes the marriage indissoluble, for the Greek Church never permits of divorce. The priest covers his right hand with his robe, and on it the bride and bridegroom place their right

* In the Jewish form of marriage a cup of wine is drunk by the bride and bridegroom.

hands, and with the crowns still over their heads, the priest slowly leads them three times round the altar. This part of the ceremony is understood to typify that the pair are thus to walk together through life, and the Divine Presence along with them, which is here typified by the priest, as the representative of God; the mystical three times is symbolical of the Holy Trinity. While this is doing, the choir are singing, "Exalt, O Isaiah, for a virgin has conceived and brought forth a son, Emmanuel, God and man; the East is His name; Him do we magnify, and call the Virgin blessed." The two are now bound as one in the ties of holy matrimony. The priest takes off the bridegroom's crown, saying, "Be thou exalted, O bridegroom, like unto Abraham, and blessed like unto Isaac, and multiplied like unto Jacob. Walk in peace, and do all according to the commandments of God." Taking the bride's crown he says, "And thou, O bride, be thou exalted like unto Sarah, and rejoice like unto Rebecca, and multiply like unto Rachel; rejoice with thy husband, and keep the ways of the law; and the blessing of God be with thee." A couple of prayers then follow, after which the couple kiss each other three times, and the ceremony may be said to be ended.

In the Greek Church some of the clergy are married and some are monks, but a monk cannot celebrate the ceremony of marriage; it is only a married priest who can do so. For this reason the Metropolitan of St. Petersburg, who is a monk, could not officiate.

Dr. Clarke, in his "Travels," gives such a graphic account of the funeral of Prince Galitzin, that it may be taken as a fair description of the burial ceremonies.

"On the 28th of May, we again saw Plato * in great pomp, at the burial of Prince Galitzin, in Moscow. This ceremony was performed in a small church near the Mareschal Bridge. The body was laid in a superb crimson coffin, richly embossed with silver, and placed beneath the dome of the church. Upon a throne, raised at the head of the coffin, stood the Archbishop, who read the service. On each side were ranged the inferior clergy, clothed, as usual, in the most costly robes, bearing in their hands wax tapers and burning incense. This ceremony began at ten in the morning. Having obtained admission to the church, we placed ourselves among the spectators, immediately behind his Eminence. The chanting had a solemn and sublime effect; it seemed as if choristers were placed in the upper part of the dome, and this perhaps was really the case. The words uttered were only a repetition of 'Lord, have mercy upon us!' or, in Russian, 'Ghospodi pomilui!' When the Archbishop turned to give his benediction to all the people, he observed us, and added, in Latin, 'Pax vobiscum!' to the astonishment of the Russians; who, not comprehending the new words introduced into the service, muttered among themselves. Incense was then offered to the pictures and to the people; and, this ceremony ended, the Archbishop read aloud a declaration, purporting that the deceased had died in the true faith, that he had repented of his errors, and that his sins were absolved. Then turning to us, as the paper was placed in the coffin, he said again in Latin, 'This is what all you foreigners call *the passport;* and you relate, in your books of travels, that we believe no soul can go to heaven without it. Now, I wish you to understand what it really is; and to explain to your countrymen, upon my authority, that it is nothing more than a declaration or certificate concerning the death of the deceased.' Then laughing, he added, 'I suppose you commit all this to paper; and some future day, perhaps, I shall see an engraving of this ceremony, with an old archbishop giving a dead man his passport to St. Peter.'

"The lid of the coffin being now removed, the body of the prince was exposed to view; and all the relatives, the servants, the slaves, and the other attendants, began the *Ululation*, according to the custom of the country. Each person, walking round the corpse, made prostration before it, and kissed the lips of the deceased. The venerable figure of an old slave presented a most affecting spectacle. He threw himself flat upon the pavement, with a desperate degree of violence, and, being quite stunned by the blow, remained a few seconds insensible; afterwards, his loud lamentations were heard, and we saw him tearing off and scattering his white hairs. He had, according to the custom in Russia, received his liberty upon the death of the Prince, but choosing rather to consign himself for the remainder of his days to a convent, he retired for ever from the world, saying, 'Since his dear old master was dead, there was no one living who cared for him.'

"A plate was handed about, containing boiled rice and raisins—a ceremony we are unable to explain. The face of the deceased was then covered with linen, and the Archbishop poured consecrated oil, and threw a white powder, probably lime, several times upon it, pronouncing some words in the Russian language; these he afterwards repeated aloud in Latin, 'Dust thou art; and unto dust thou art returned.' The lid of the coffin was then replaced, and after a requiem, 'Sweet as from blest voices,' a procession began from the church to a convent in the vicinity of the city, where the body was to be interred. There was nothing solemn in this part of the ceremony. It began by the slaves of the deceased on foot, all of whom were in mourning. After the slaves followed the priests, bearing tapers; then was borne the body, on a common drosky, the whip of the driver being bound with crape; afterwards proceeded a line of carriages, of the miserable order before described. But, instead of the slow movement usually characteristic of funeral processions, the priest and the people ran as fast as they could, and the body was jolted along in a very indecorous manner. Far behind the last rumbling vehicle were seen persons running, quite out of breath, and unable to keep up with their companions." — *Clarke's Travels*, vol. i.,c. ix.

In the present day, funeral processions are managed with more decorum; a special vehicle is used for the coffin; a decorated pall is thrown over it; and every person in the street takes off his hat to it as it passes.

Such are the three great events of life—birth, marriage, and death—and the ceremonies of the Greek Church connected with them.

The illustration represents the ancient vase which brought the "chrism" from Constantinople, and the figure is that of Philarete, the Metropolitan of Moscow. There are four Metropolitans in Russia, and the oldest is, by right of seniority, the spiritual head of the Church. Philarete at present enjoys that honour; he is 83 years of age; although weak in body from age, yet he is in the perfect use of his mind, and has a very bright, genial expression of face. The Prince of Wales, during his late sojourn at Moscow, visited this venerable prelate, and the dress shown in the illustration was that worn on the occasion.

* Plato was the name of the Metropolitan of Moscow at that time, in 1800.

A GOSSIP ABOUT AMBER.

By B. Lambert.

AMBER, one of the most beautiful fossil productions of a bygone age, possesses, apart from its intrinsic value as an art material, the greatest possible interest to the student in the sciences of Entomology, Botany, and Geology. How was it formed, and whence does it come? are questions which were debated in days long anterior to the Christian era. Its translucent aspect and wealth of glowing colour have been utilized by the bards of every clime in the construction of their most charming imagery, whilst on its electric characteristic there has been erected a goodly superstructure of all-pervading superstition, the trace of which may be found in the folk-lore of the Western nations.

The geographical distribution of amber would appear to be tolerably extensive, but the largest quantity is found on the southern shore of the Baltic, between Memel and Königsberg, where it is cast up by the action of the ground swell after northerly gales. Under similar circumstances it is found on the coast of the Adriatic, on the Sicilian seaboard, and on the beach in our own counties of Norfolk and Suffolk. Mining for amber in beds of brown lignite is carried on in Prussia with varying success, and good pieces, both as regards size and quality, are occasionally found in excavations all over Europe, the British islands not excepted. Still, amber continues to be, *par excellence*, the gem of the sea, by which it is yielded up in sparing manner, and then only when in tempestuous mood.

The origin of amber has been for ages a fertile subject of discussion; and theories of the wildest character—but on that account not the less beautiful as imaginative conceptions—have been started to account for the singularity of the phenomena by which it is surrounded. There can be no doubt, however, that amber is the indurated resin of extinct Coniferæ, and is moreover the product of different species of coniferous trees. Judging from the variety of objects found impacted in amber, the inference is clear that the forests of northern Europe were, at the epoch of its production, of a very different character to those of the present day. A tropical sun must have poured a flood of light and heat on luxuriant vegetation instinct with life, extending over the present bed of the ice-bound Baltic; and no better sermon in fossils can be read than the history of that epoch, as exhibited in the plants and insects imbedded in the clear juice which flowed from the stems of its forest trees.

Amber is found in masses, irregularly shaped and, generally speaking, of a small size; the colour varies from exceedingly pale straw to deep orange. In clearness it is obtained of all degrees, from transparency to opacity. It is exceedingly light, having only a specific gravity of 1·07; has a conchoidal fracture; is brittle, but can be easily cut with a sharp knife; and becomes negatively electrical by friction. Its chemical formula is $C_{40}H_{32}O_4$. By distillation it yields succinic acid, that being its leading characteristic. It fuses in air at 550° Fahr., and does not drop, like copal under similar circumstances, but burns with a yellow flame, leaving a shiny bituminous mass, which is used in the arts as a basis for varnishes.

Amber was held in high estimation in periods of the most remote antiquity. Its electrical property was first commented upon by Thales of Miletus, who flourished 600 years B.C. The substance was on that account called by the Greeks *electron*, a name which was, however, equally applied to an amalgam composed of gold and silver; and it is from *electron* that our word *electricity* is derived.

Nearly all the Greek and Latin authors have something to say about electron. By some it was supposed to be produced by the rays of the setting sun on the surface of the earth, resulting in an "unctuous sweat," which was washed off by the sea and further elaborated in its depths. By others, that a piece of water, called Lake Electron, was situated in the gardens of the Hesperides, and that amber fell into the water from the poplar trees by which its banks were lined; and not a few believed, with Sophocles, that amber was the tears shed for Meleager by the birds called Meleagrides, in some far eastern country. The prevailing idea, however, in the first century of the Christian era, was, that amber was a vegetable product, distilled from trees at one time indigenous to the places where the substance was found,—an idea which is elegantly elaborated by Ovid in his notice of the death of Phaeton. The story is, that the sisters of Phaeton being overcome with sorrow for his untimely death, wandered over the surface of the earth, loudly lamenting their bereavement. Having reached the banks of the Po, and one of them desiring to recline, the discovery was made that they were gradually being transformed into trees; and as the bark finally closed on their heads, tears burst forth—hardened in the sun—dropped into the river, and were by it borne to the Latian matrons; so that, according to Ovid, amber was the tears of the sisters of Phaeton.

In the Old Testament Scriptures amber is mentioned in the book of Ezekiel; but the greater number of biblical scholars agree that the word does not mean amber proper, but a metal similar to, if not identical with, that named by the Greeks electron. This want of clearness in nomenclature has been productive of much confusion, and appears moreover to have been very prevalent; as, for example, in the Hindu mythology, where amber and ambergris are made interchangeable terms. It is extremely difficult te judge whether the ancient Hindus had three different substances which they denominated amber, or only two. Inclining to the opinion that there were

three categories, they would be "Golden" amber, "Water" amber, and "Black" amber. There is very little doubt that by the first is meant fossil or true amber, and by the second and third ambergris. Frequent reference is made to the exquiste perfume of amber; but seeing that true amber has little or no perfume, in comparison with ambergris, the latter is doubtless indicated. Moreover, the described colours of the last two sorts,—viz. grey and black, point to ambergris, that substance being generally black and soft when expelled from or found in the sperm whale, and gradually acquiring lightness of colour, hardness, and pungency, as it is tossed about on the surface of the sea. The Hindus knew that both amber and ambergris were waifs of the sea; and their assumption that black amber was the excrementitious matter of some large fish was singularly near the truth.

As far back as the beginning of the Christian era, not only had definite ideas, consistent with reason, been formed as to the origin of amber, but an active trade in the article had arisen, in order to supply the Italian market. Pliny says, "There can be no doubt that amber is a product of the islands of the Northern Ocean, and that it is the substance by the Germans called Glæsum." After indicating more particularly the locality, he tells us that amber is produced from a marrow discharged by trees belonging to the Pine genus, like gum from the cherry, and resin from the ordinary pine; that it is a liquid at first, gradually hardened by atmospheric action; and he adduces in proof that it is the juice of the pine, the allegation that it emits a pine-like smell when rubbed, and that it burns with the odour and appearance of pine wood. The precise locality of the northern amber country was about the same period laid down by Tacitus, who, in his description of the tribes of the Æstii, says they are the only people that gather amber, which by them is called Glessum, and that it long lay disregarded among the débris thrown up by the sea, until Roman luxury created a demand for the neglected substance. It is interesting to note that the name of the tribes described by Tacitus as amber-collectors, is still preserved in that of the palatinate of Esthonia, in the kingdom of Prussia. During the reign of the emperor Nero, the demand for amber as a material for articles of personal adornment must have been very great. The Roman ladies, like their fair sisters of later periods, were not insensible to the delicate beauty of amber ornaments, but, on the contrary, held them in the highest possible esteem; and some idea may be formed of the extent to which ostentatious display was carried by the members of the Imperial court, from the fact that the Emperor despatched a messenger to the amber country, in order to procure a large supply of the article, and with such success that the nets and other paraphernalia of the gladiatorial arena were studded with pieces of the much-coveted material. The journey from the Tiber to the Baltic, by way of the Adriatic and the Danube, must have been an undertaking of serious magnitude; and the fact that such an expedition was ordered, in all probability to gratify the whim of a reigning beauty, and certainly to procure an article of the merest luxury, furnishes a fair example of Nero's reckless munificence.

It would be too much to expect from uninstructed man, that such a peculiar product as amber should not have been invested with supernatural attributes. Its property of attracting light substances after friction was so suggestive of life, as to lead observers to the most astonishing conclusions. That a fragment of inert matter should have the power of attracting, and not only so, but of holding another fragment of matter equally inert, was so obviously opposed to natural law as to leave no doubt in the mind of any rational being that some intelligence of another mould, some fairy or some wayward djinn, had evinced consummate taste in the selection of a material for its dwelling. Hence, in the fairy literature of Persia, one of the abodes of the Peris is called Amber-ābād; hence the amber moon of the Hindu, and hence too the various superstitions current among the northern nations connecting amber with fairy pranks and witches' spell. Among the tribes inhabiting the southern shore of the Baltic, this belief was naturally prevalent, as the mysterious circumstances attaching to the appearance of amber were kept continually before them, and so, without possessing any very definite notion on the subject, the substance was associated in their minds with the manifestations of witchcraft, in which they firmly believed. This view of the matter is fully borne out by the plot of a story entitled "The Amber Witch," written by the pastor of a district in Pomerania, and published in the year 1843. The time is the period of the Thirty Years war, and although there are a good many actors in the drama, including a veritable witch, the whole of the complications of the plot—complications which nearly had a disastrous termination for the heroine—arise from the circumstance of the poor pastor and his daughter having discovered a vein of amber, from the secret working of which they derive a considerable, and, in the opinion of their neighbours, a most mysterious revenue. The daughter, in the stillness of the night, is seen by malevolent eyes in quest of the hidden treasure, and, seizing the incident, the *real* witch succeeds in fastening the authorship of her evil deeds on the pastor's daughter, who is therefore called the Amber Witch. The story is well told, and the name will not be easily forgotten, as it is the title of an opera by the late Mr. Vincent Wallace, by whom the leading incidents of the tale have been wedded to most charming music.

If the superstitions connected with amber were localized in the Baltic provinces, the natural expectations of the investigator would be satisfied; but the interest with which the subject is clothed is greatly increased when it is found that the centre of the belief in the supernatural efficacy of amber, as far as ancient records and modern relics enable us to judge, is to be found in Scotland, the inhabitants of which country seem to have had the most unlimited faith in what may be fairly denominated

amber-power against witches, against fairies, against the too critical gaze of man, and even against the grand heritage of the human family—Death. The Scottish for amber is "lammer." Lammer beads are held at the present day by the Scottish peasantry in peculiar veneration. When strung on red thread, they were supposed to be a charm to repel witchery; worn by children, they were considered a certain preventive of dangerous illness, and were deemed particularly potent against the spells of witches and evil machinations generally. A set of lammer beads was at one time an ordinary present from a mother to her daughter on the night of her marriage; so that, being worn about the neck, her husband might the more be charmed with her beauty; but the most extraordinary form which the belief in amber-power seems to have taken in the minds of the Scottish people, was that of attributing immortality as the result of its internal administration. Faint traces of this singular belief may be discovered in the records of ancient times, but nowhere is the error so distinctly and particularly set forth as in the following lines, collated from an old number of the "Scots Magazine," respecting the virtues of lammer-wine :—

Drink ae coup o' the lammer-wine,
An' the tear is nae mair in your e'e.
An' drink twae coups o' the lammer-wine,
Nae dule nor pine ye'll dree.
An' drink three coups o' the lammer-wine,
Your mortal life's awa.
An' drink four coups o' the lammer-wine,
Ye'll turn a fairy sma'.
An' drink five coups o' the lammer-wine,
O' joys ye've rowth an' wale.
An' drink sax coups o' the lammer-wine,
Ye'll ring ower hill an' dale.
An' drink seven coups o' the lammer-wine,
Ye may dance on the milky way.
An' drink aught coups o' the lammer-wine,
Ye may ride on the fire-flaught blae.
An' drink nine coups o' the lammer-wine,
Your endday ye'll ne'er see;
An' the nicht is gane, an' the day has come
Will never set to thee.

And the idea is further devoloped in the following verse from a poem called "The Marmaiden of Clyde." The mermaid, while performing her toilet, relates in song the story of her noble parentage; of her having been decoyed to the river-side by a deer of which she was in chase; of her being there benighted and seized by a "stalwart Gowe," who plunged with her into the flood, and gave directions for her transformation into a mermaid :—

An' tak my bride, my bonnie bonnie bride,
To the dwerch the wicht can say,
An' wash awa the changefu' life
That lives in upper day;
And dip her first in the Norroway sea,
She's mine for evermare;
And dip her syne in the lammer-wine,
Alike then sea and air.

It requires some effort of imagination to conceive a period when any considerable portion of the inhabitants of Scotland could believe in an elixir of immortality. That they did so, however, there is no room to doubt; and the strength of their belief in all the varieties of amber-power is attested by the vitality which characterizes the remains thereof in the present year of grace.

Up to a comparatively recent period, amber was employed as a remedial agent in the practice of medicine. The elder Pliny extolled its virtues, and although it has now no place in the Pharmacopœias of this country, suffering humanity has not long enjoyed immunity from its empirical exhibition. Formerly it was in great favour as a stimulant, being the principal constituent of *eau de luce*. This celebrated essence was a volatile preparation of oil of amber with ammonia; evaporated to thickness, it was used for removing stains from cloth, and when diluted it was applied as a stimulant in fainting-fits. As a medicine, amber was used in a variety of forms, ranging from unsophisticated powder to the most elaborate products of distillation. In Salmon's "Pharmacopœia Londinensis," published in 1678, amber, whether "white or yellow," is described as "hot and dry, binding, cephalick, cardiack, hysterick, and analeptick," and we are told that it stops catarrhs, cures epilepsies, apoplexies, lethargies, and megrims, scurvy, green sickness, jaundice, and ulcers; that hysterical fits, palsy, convulsions, and falling sickness yield to its virtues, and that it is eminent against measles, small-pox, spotted-fever, plague, pleurisy, palpitation of the heart, and other malign diseases; in fact, amber would appear to have been a general specific in all the ills that flesh is heir to. It is possible that our self-complacency may be disturbed by the reflection that no further back than three generations, such an exposé of medical practice should have been received with favour by the profession; and if anything could compensate us for not having being born in the "good old times," it would be a perusal of the old dispensatories, the pages of which bristle with atrocious compounds, grimly intended as so many aids to stricken humanity in the fight which it is continually waging with disease. Amber was not only used as a medicine, and as a volatile essence having some similarity to our *Eau de Cologne*, but it was also worn as an amulet or charm against particular diseases. There were many ailments in the prevention of which it was deemed efficacious; particularly, the plague, the ravages of which were greatly dreaded. As a charm against this scourge, amber was worn by all classes of people, from the meaner sort up to the highest dignitaries of the Church. It would appear that the mere wearing of the charm was not sufficient to preserve an individual from the fatal malady, but that some preliminary ceremonies were essential to that end. The piece of amber employed should be "translucid," and previous to being hung about the neck should be "rubbed on the jugular artery, on the hand wrists, near the instep, and on the throne of the heart;" after all which, it was supposed to be a certain preventive of the plague. Whether it was so in reality, is matter of opinion; but if the feeling of immunity from danger lent greater nerve and boldness to those who, themselves untouched, ministered to the necessitics of the afflicted, the

belief in amber-power has not been without its uses.

As already observed, the origin of amber has at all times been a bone of contention among the learned. The substance has been examined and re-examined under every conceivable light. Its chemical constitution has been ascertained, its mechanical structure and optical properties observed, and the organic remains preserved in its embrace have been closely scrutinized, with the sole result that the balance of testimony is in favour of its being an exuded vegetable juice, and that its recognition is surrounded with difficulties. Baron Liebig is of opinion, or rather he thinks it probable, "that amber is a product of the decay of wax, or of some other substance allied to the fats or fixed oils," basing his assertion on the presence of succinic acid, that being one of the products of the oxidation of stearic and margaric acids; and Berzelius asserts that there are two resins in the constitution of amber. Sir David Brewster says that his observations on the optical properties and mechanical condition of amber, by means of polarized light, "appear to establish beyond a doubt, that amber is an indurated vegetable juice, and that the traces of a regular structure indicated by its action upon polarized light are not the effect of the ordinary laws of crystallization, by which mellite has been formed, but are produced by the same causes which influence the mechanical condition of gum-arabic, and other gums which are known to be formed by the successive deposition and induration of vegetable fluids." The evidence on which it is assumed that amber is a vegetable resin, analogous in its formation to gum-arabic, &c., is cumulative, as, apart from the wood, leaves, flowers, and fruit found enclosed in amber, and recognized as having belonged to coniferous trees now extinct, the substance has been found impacted in the wood which has been placed by microscopists as a Pinus. The forms of the lumps, now as tears, then as stalactites, and generally in pieces of irregular mould, as if the juice had been run into bark-crevices, exactly tally with our experience of exuded resins. The structure of the cylindrical specimens tells of the successive flowings of a limpid juice over a partially indurated surface, and the perfect state in which the delicate wing-tracery of insects is preserved, seems to point to their having been enveloped in a cold limpid fluid, and not in a hot viscous mass such as amber would have been if the product of vegetable remains acted upon by terrene heat. There must have been several descriptions of amber trees, to which the differences which have been observed in density and colour are referable. The colour of Sicilian amber is generally deeper than that from the Baltic, and it is stated that in Germany an experienced amber-worker can discriminate between pieces found on different parts of the coast. Nor is amber invariably found in a hard state, as there is an instance on record of a gentleman having received from a friend located on the Baltic coast, a piece so soft as to take an impression of his seal; and the same individual speaks of another piece soft on one side and hard on the other. The principal argument in support of the theory that amber is an organic distillate from vegetable remains, resulting from subterranean or solar heat, is the largeness of many pieces, which, beyond all question, remain in their original condition; the inference being that their size precludes their acceptation as an exuded resin from a living tree. It being, however, admitted that our knowledge of the amber trees is of the most incomplete character, and there being nothing improbable in the supposition that the forests of that remote epoch were tenanted by gigantic forms, the argument is more specious than real. On the contrary, what lends most weight to the pitch theory, is the peculiar appearance which some specimens present, as if they had at one time been in a state of fluidity, during which the heavier particles had gravitated, leaving the upper section perfectly clear. Thus, one section of a lump may consist of fatty or mottled amber, almost or entirely opaque, while the other section may be composed of the purest material, as regards colour and transparency; the two sections have an appearance of perfect homogeneity, and the deposition of the fatty part seems to be marked by wave-lines, as if the mass had been subjected to strong air-currents when in a fluid state. Appearances such as those just described are obviously antagonistic to the theory of gradual exudation, and can only be reconciled with it on the hypothesis that the flow of clear resin had been intercepted by some foreign body, such as a spider's web, and that the fatty or mottled appearance is due to the incorporation of such foreign body with the clear vegetable juice. In many specimens possessing this duplex character, there is evidence of structure in the fatty part, a circumstance which invests the web theory with some amount of probability.

The observation of succinic or amber insects has been diligently attended to by many eminent entomologists, and several interesting collections have been made by those curious in such matters. The beautiful state of preservation in which some specimens are found, extending even to the retention of the natural colours, has enlisted the curiosity of thousands of persons totally unconnected with the pursuit of science, persons who could give no better reason for the indefatigable manner in which they hunt after rare examples, than those contained in Pope's well-known lines:—

> Pretty! in amber to observe the forms
> Of hairs, or straws, or dirt, or grub, or worms!
> The things we know are neither rich nor rare,
> But wonder how the d—l they got there.

Concerning how they got there something has already been said, and as far as the rarity of succinic insects is concerned, Pope was unquestionably wrong, as they open to us a new chapter in old-world history. The beauty of the envelope presents to us, in all the vividness of life, the insects, the beetles, and the lizards which swarmed in the primeval woods; whilst the completeness of the collection renders their acquisition a matter of the greatest moment to the comparative entomologist;

to him they are both rich and rare, and his appreciation of them could not be better expressed than in the following metrical version of one of Martial's epigrams :—

> A drop of water from the weeping plant
> Fell unexpected and embalm'd an ant;
> The little insect we so much contemn
> Is, from a worthless ant, become a gem.

The whole of the forms, both of insects and animals found in amber are recognized as forest denizens, and it has been remarked that they bear a sufficiently close resemblance to existing species to enable a satisfactory inference to be drawn respecting their habit. Many strange objects impacted in amber have been at various times offered to collectors; but close scrutiny has generally revealed a well-executed fraud. Not in this category, but still so strange as to excite the gravest doubt, is a piece of amber containing a fish, in the Hope collection at South Kensington. The material is formed into the handle of a seal, and the tail of the fish is concealed by the ruggedness and opacity of the amber where it enters the metal mounting. The singularity of this specimen consists, firstly, in the fish; secondly, in the marked difference between that section of the amber enclosing the tail and the clearness of the remainder in which the body is exhibited; and lastly, in the evenness of the set of the object. It is very desirable, in the interest of science, that this piece of amber should be subjected to microscopic examination divested of its metal mounting; and until then, all that can be said about it is—"Curious if true."

The uses to which amber is put are not very numerous. As a material for art carving, nothing can be more beautiful. The principal market is Constantinople, where it is made into pipe mouthpieces, and articles of female ornament, such as beads. The Turks and Armenians are acknowledged to be first-rate judges of amber, and a connoisseur could enjoy no greater treat than a stroll through the Bazaar at Stamboul, where the amber-workers are located. For a pair of chibouk mouth-pieces of moderate dimensions, but well matched as to colour, sums varying from £20 to £50 will be demanded; whilst for a chaplet of beads, three shillings the drachm would not be considered exorbitant, although that amount might be fractionally reduced, should the purchaser have the nerve and patience to devote a day or two to the conduct of the bargain, and be able to withstand the flattering allusions to his imperial descent with which Ali or Hassan will plentifully bespatter him. There are many very fine examples of carving in amber to be found in the Royal collections of Europe. In the loan collection at South Kensington may be seen an octagonal casket, the property of her Majesty the Queen, the oblong plates carved with figures emblematic of the cardinal virtues; and in close proximity there is a larger casket of architectural design, chiefly remarkable for the variety of colours in the amber used in its construction. It is ornamented with statuettes, twisted pillars, and quaint panelling, the workmanship being Flemish of the early part of the 17th century. A very elegant piece of modern carving in amber was shown at the International Exhibition of 1862, in the shape of a vine branch, with leaves and fruit; but such works of art must always be scarce, owing to the difficulty of procuring lumps of amber of sufficent size and purity. The only purposes to which amber is applied in the useful arts is in the manufacture of varnishes for carriage-builders and photographers. That used for the panels of carriages is expensive, and is a long time in drying; but, on the other hand, it is the hardest and most invulnerable of any known varnish.

Any gossip on amber would be incomplete were not allusion made to the preference which in all ages has been given to amber colour by the ladies. Sometimes it is in hair, and at others in dress; but whatever form the fancy might assume, amber has always been to the daughters of Eve "a thing of beauty," and its golden straw-colour a "joy for ever." It is amusing to read, by the light of modern experience, the strictures of Pliny on the amber extravagances of his day, as, not only is the expensive luxury denounced, but he cudgels Domitius Nero soundly for bestowing the name upon the golden tresses of his wife, sarcastically remarking, that "as fine names are never wanting for bodily defects, a third tint has been introduced of late among our ladies, under the name of amber-colour." Verily, fashion repeats itself, as the golden tresses which Nero so much admired, and which Pliny so sedulously vilified, are, as far as colour is concerned, precisely those which linger in the memory of the modern Benedict as being the crowning glory of his guardian Angel.

THE AFRICAN ELEPHANT.

By Centurion.

THE African variety of the Elephant has received, in comparison with his Asiatic congeners, but little notice from modern naturalists, despite the numerous points of interest which his history and peculiarities offer to the observer. To glance at a few of the historical details which the study of the animal presents, and to collect such observations of its habits as are *really trustworthy*, is the writer's aim in penning the following brief account.

The African Elephant, the *Elephas Africanus* of Cuvier, which, with the exception of certain regions of limited extent, like Egypt, in which it is not

found, is spread over the whole of that continent, varies much in size, and to a certain degree in hue, in different localities. In South Africa, where these animals have been most attentively observed, they ranged, in former times, over vast tracts of country, from the belt of forest land which fringes the coast line of Natal, to within a few miles of Cape Town; but of late, since the population has become more widely spread, and since the use of fire-arms has increased, the Elephant, ever the first to retreat before the advent of man, has here nearly disappeared. Nor is the decrease confined to the limits of the colony; for far across the border the numbers are steadily diminishing, partly from the animals retiring to less-frequented regions in the interior, partly, no doubt, owing to the reckless destruction of females and young, as well as of males, at all seasons alike.

The following average dimensions of a South African Elephant, and the accompanying description of its appearance, may be quoted as a good example of the African variety in general. The height of the males may be taken at 12 feet at the shoulder, that of the females about 8 or 9 feet, and the average length of the animal from 18 to 20 feet. The head is more round, and the forehead more convex, than in the Asiatic variety, and the huge ears, often 6 feet in length, overlap at the back of the head, and reach far down the legs. The difference in physiognomy between the two varieties, though difficult to define, is very marked and cannot fail to attract the notice of any one familiar with the Indian type. Unlike the Asiatic animal, in which the male only is provided with tusks, both males and females in Africa possess those appendages, which they use extensively in ploughing up the ground in search of roots and bulbs. These tusks are either nearly straight or curved *upwards*, the latter being the most usual form. The toes are five on each foot. The teeth present certain marked differences from the Asiatic variety, and in some degree resemble those of the American fossil Elephant, or Mastodon. The skin is a dark iron-grey, rough and destitute of hair. As we approach the equator (at least in the vicinity of the coast), although food is more plentiful, the Elephants appear to *decrease* in size, and to carry less formidable tusks. Observers, on both the east and west coast, speak of 8 to 9 feet as the average height of a full-grown bull Elephant in Equatorial Africa, and state also that the tusks weigh from 50 to 60 lb. In South Africa, 100 lb. is not an unusual weight, and one in possession of the late Mr. Gordon Cumming weighed 173 lb. Near the equator, too, the Elephants are often of a darker hue; white Elephants (which are in fact Albinoes) have never, we believe, been met with in South Africa, although instances have been observed further north, on the borders of Abyssinia. Dr. Barth, in his "Travels in North Africa," speaks of having met with black, grey, and yellow varieties.

The habits of the African Elephants may be thus briefly sketched.

Near the Cape Colony, they are found in small herds, under the leadership of one or more bulls; but as we advance further into less-frequented regions, these herds increase greatly in numbers. The young remain unusually long in company with their dams. During the breeding season terrific combats often take place between the males; * the old or vanquished bulls roam about alone or in pairs. These are the "Schelm" Elephants of the Dutch hunters, and, like the "Rogues" in Ceylon, are the most dangerous to encounter. Elephants are particular in frequenting the freshest and most verdant parts of the forest, their favourite spots being often in secluded situations, far away from water.† In these cases they leave their mid-day haunts at sun-down, and commence their march to the water, which, perhaps, is 12 to 20 miles distant; arriving here an hour or two before midnight, they quench their thirst and cool their bodies by spouting over them huge volumes of water, and then assume the path to their forest solitudes once more. The bulls frequently lie down on their sides at night and sleep, the place usually selected being the side of one of those huge ant-hills, here so plentiful. The deep impression of the under tusk may be often found in these situations; but the females, and even the males, in exposed positions usually sleep standing, resting themselves against a bank or the trunk of a tree.

Their food consists of branches, leaves, roots of trees, and bulbous plants. The power they exert in felling and rooting up trees of large size is remarkable, so also is the readiness with which they secure tempting branches in positions seemingly the most inaccessible. Rearing themselves on their hind feet, the fore-legs resting against the trunk of a tree, they manage to bring down leaves and branches from heights almost incredible.

It is singular also to observe that, even where the Elephants roam in vast herds like one noticed by Dr. Livingstone, on the banks of the Zambesi, consisting of 800 animals, and covering an extent of more than two miles, the destruction of vegetation is almost imperceptible. This no doubt is due, as the Doctor suggests, to the care with which they select their food, but it contrasts strongly with the frightful havoc which a single animal will commit on cultivated ground. This careful selection of food, which is most noticeable in the larger animals, is doubtless not only necessary to their healthful preservation, but it prevents that vast destruction of the materials of sustenance, which their size, and the large amount of food they individually require when in captivity, would lead us to infer. The mutual relation between animal and vegetable life is perhaps more marked in places, like Equatorial Africa, which the disturbing influences of colonization have never reached; and we find consequently that the varieties of the larger animals are here placed amid vegetation, the differences in which are so marked, that

* Captain Drayson, R.A., in one of his South-African sketches, mentions the fact of a portion of a tusk, 5 or 6 inches long, having been found in the flank of a bull Elephant and which had evidently been broken off in one of these encounters.

† G. Cumming's "Five Years of a Hunter's Life."

the presence of particular trees and shrubs may be taken as indications of the presence of some particular beast.

The scarcity of suitable food and of water would appear to be the only checks nature has set to the extension of the elephantine race. The animal's vast weight, and the impenetrability of its hide, enable it to pass unresisted and unscathed through the desert thickets. It fearlessly breasts the strongest streams. Climbing on its knees or squatting dog-fashion on its hams, few slopes are so steep as to arrest its progress; while, as Sir E. Tennent has remarked in reference to the Ceylon Elephant, "no altitude appears too lofty or too chilly for it, if it but possesses the luxury of a boundless supply of water.

Elephants are long in reaching maturity, and, like all such animals, probably attain a considerable age; but on this point it is hopeless to seek for reliable information. The Ancients, we know, had wonderful tales of the longevity of these creatures. Philostratus asserted the Elephant lived 400 years, founding his belief on the story of one with a particular mark, having been captured by Juba, king of Libya, 400 years after an engagement in which the animal had fled to Mount Atlas. Pliny gives them an average life of from 200 to 300 years, on the authority of Aristotle; and the Romans, in the time of Gordian, chose an Elephant for the symbol of eternity. Setting, however, these fables aside, there is satisfactory evidence that the Asiatic Elephant frequently attains a considerable age, nearly a century in a state of domestication, and there is no reason to believe the African variety to be shorter-lived. Blumenbach, indeed, has placed their probable average age at 200 years.

It is singular that, while in South-east Africa the carcases of Elephants which have died a natural death are never found, in the Gaboon country the supply of ivory is, according to M. du Chaillu, almost entirely procured from the bodies of animals which thus die in the forests. This leads us to the subject of the animals' tusks, the "Elephants' teeth" of commerce. Not only are the tusks of the African variety generally of a far larger size than those of the Asiatic, but the ivory itself shows a remarkable difference of composition, containing a far larger proportion of gelatine, which, in many instances, renders it less fitted for manufacturing purposes. Some very fine ivory is, however, brought from a small tract of country situate, almost directly under the equator, on the Gaboon river. These tusks, which are rather small in size, are of a dark coffee-colour, in many cases almost black on their outside, the interior being what is termed technically "green ivory," which, when once bleached, is supposed to retain its colour more perfectly than any other kind. The largest tusk in Mr. Gordon Cumming's Museum weighed, as we have already stated, 173 lb.; but one is mentioned by Cuvier as having weighed 350 lbs.; and another, weighing 800 lb. (?), is said to have been recently in the possession of an American house. This firm sent to the Exhibition of 1851 the largest piece of sawn ivory of which we have any record. It was 11 feet long and 1 foot broad. Above 1,000,000 lb. of ivory are stated to be consumed annually in England alone, the price varying, according to quality, from £15 to £40 per cwt. More than half of this quantity is probably derived from Africa.

It has been sometimes asserted that the proportion of brain in the African type is considerably less than in the Asiatic, and that the intelligence and fitness of the animal for domestication are less developed; but there appears to be no sufficient ground for such a belief. Dr. Livingstone, in his recent work on the Zambesi, has pointed out a passage in Livy, which clearly proves that the Elephants used in the Punic wars were captured and trained by the Carthaginians, and were not brought from the East, as had been sometimes suggested with a certain show of probability. Medals, too, of the Roman Empire, which have come down to us, representing the performances of the animals in the amphitheatres, so plainly depict the characteristics of the African type, as to leave no doubt of their origin.

In Mr. F. Buckland's Second Series of "Curiosities of Natural History" is a passage which, although it refers to the Asiatic species, throws some light on the market-value of these animals at the present time.

"An Elephant," he tells us, "will fetch from £500 to £600. The young ones are preferred, as they require less food and are more manageable. There are no full-sized Elephants at present in England, and one would probably fetch at least £1,000. A dead Elephant will fetch from £20 to £50, according to size, any day."

ON SKETCHING FROM NATURE.

By Aaron Penley, Professor of Landscape Painting at the Royal Military Academy, Woolwich.

No. VIII. CRUMMOCK WATER, CUMBERLAND.

FULL instruction was given in last month's Nature and Art for the first washes of the Lake Scene, of which I now present the finished drawing. That it may be carried through without deviation from the first intention, I have worked upon the actual Chromo-lithograph itself, carefully attending (with another impression before me) to every detail of pencilling, so that those persons who undertake to copy it may be enabled to continue the colouring without confusion or difference.

There is much softness and simplicity of treat-

ment in the drawing—breadth being its characteristic. Therefore, when adding to it the warm grey shadows, all dark touches will have to be avoided, otherwise it will not exhibit that serene atmosphere for which our English Lakes are so deservedly renowned. Although *repose* constitutes the feeling of the scene, yet it is by no means wanting in variety either of form or colour. There is, indeed, much diversity—much for the eye to dwell upon, as it seans the broken surfaces of Red Pike on Crummock Water, and the High Style and Haycocks on Buttermere. It will now be seen how valuable those pencilled outlines have been in establishing truthfulness of form and position, giving to each spur of the mountains its true character and formation, so that the appropriate tints can be applied unhesitatingly to the several shadows of its component parts.

The clouds are touched upon with rose madder and indigo; the tint to be used very liquidly. After this is done, proceed to put in the shadowed side of the rocks on the near mountain (Red Pike) carefully following the pencilled outline. There are two degrees of shadow made with cobalt and rose madder, both of which are to be introduced *tenderly*. The greenish and isolated spur has a little yellow ochre mixed with the cobalt and rose madder; lake must be substituted for rose madder if the pupil has not the latter. A glazing—that is, a thin wash of colour—of raw sienna and a little gamboge is next to be put on the grassy surface, while, in the warmer parts, the tint is made with raw sienna and rose madder.

The distant mountains are principally shaded with indigo and cobalt, and the lighter spaces warmed with light tones of rose madder. The red tint also of the right portion of the mountain in light, is obtained by one or two washes of rose madder over the first tints. Each of the divisional markings or forms will require strict attention, for the reason that distances are determined by them.

The line of trees in the middle distance must now claim attention; and cobalt, with a little yellow ochre and Chinese white, be mixed for the grey shadows of their colours. The cobalt should be largely the predominant, and the less there be of the white the better, or the effect might be chalky. The warm tone and general character of the trees must be given by raw sienna, with a little cobalt and rose madder for the shadowy parts. In doing this, the forms should be gracefully given without regularity of either shape or size. The treatment of such a passage as this is generally found by the learner to be difficult, because much taste, and even skill, is required to prevent stiffness. The rocky projection to the right is of cobalt, rose madder, and yellow ochre, with a little brown pink added for the darkest parts.

The foliage of the large fir tree is done with a mixture of Indian yellow, burnt sienna, and indigo used in some substance. The forms are to be attended to very accurately, so that the clusters may fall into their several masses and take their proper shapes. The stem in its dark parts is deepened with brown madder and indigo, the touches being put on with decision. It is necessary to observe the breadth of light in this tree, or the general effect will be in danger. The deepest touches have burnt sienna added. Raw sienna and gamboge are employed for the grass in the foreground, with an occasional addition of indigo where the tone inclines to green rather than to citron. The several stones and rocks are cobalt, brown madder, and brown pink; the last colour only being required for the very warm and deep touches. Yellow ochre and rose madder supply the orange tones, and also serve for the stem of the tree where it is of a light and warm hue. The markings or touches in the foreground must be placed at the extremity of the different tints so as to impart clearness and brilliancy, and secure a crispness of effect.

The water should now have a warm wash of rose madder over the darkest side, and also at the front. When dry, two more washes of cobalt and a very little Chinese white are to be touched on horizontally, leaving the several lights. After this, go over the part from near to the boat with raw sienna and a little cobalt, to give a transparent tone, and with a little more raw sienna put on the few lines of ripples when the other is dry. The boat and figures are coloured with cobalt and light red; vermilion being added for the red coat. Indigo is for the cap of the foreground figure, and vermilion and rose madder shaded with sepia are mixed with the reds for the coat.

The principal endeavour of the learner should be to keep the whole of the forms throughout, from first to last, *clearly defined*. I have been careful to give a subject for illustration that bears this stamp of manipulation, well knowing its import, and more especially in works intended for the portfolio. In this drawing the effect has been produced without any washing off, and is simply the result of laying on the colours with care and neatness.

A few words as to the design and construction of our drawing may be of much service in explaining how light and shadow, as well as contrast of tones, are dispersed systematically so as to produce a pleasing balance of effect. The sky has in it but little actual blue, which will be found at the top to the left side; this softens into warm grey to the right and deepens into a bluer tone as it reaches the mountains, while it weakens gradually into light broken clouds, interspersed with white on the lower part over the dark mountains. The water is the reverse of the sky, the dark side being under the light of it, and the light side under the dark clouds, so that the highest lights may be said to have exchanged places. This is also the case with the mountains. The breadth of warm colour on Red Pike is taken across the drawing on the foreground, and the blue-tone of the mountains in contact with the light sky, is in a less degree repeated in the darks of the line of trees, and the separate spurs at the bases of the large mountains. The breadth of warm colour is diffused over the distant foliage, and joins the foreground which is brought to a focus

upon the white bit of rock near the tree's foot, against which the figure is placed. As the principal weight of the drawing is in the tree and stones of the foreground to the left, it was requisite to give strength to the other side, only in a less degree, for which purpose the boat and depth of shadow on the rock were introduced, and they will be found to have given the balance sought. The foreground figure and the boat with figure serve to give a little animation to the scene as well as positive colour.

Believing this class of drawing to be more instructive than any other under the term of pure landscape, I purpose to continue it, and in my next subject to pursue again the plan of treating the preparatory and the subsequent stages in separate papers.

THE DUDLEY GALLERY.

FEW of us are in danger from admiring over much. It is easy, by wilfully taking a view unsympathetic with that in which a picture or other work of art has been conceived, to misprize even the greatest artists, whose habitual style of thought and power are well known. But this charming gallery is filled, for the most part, with the works of new men who bring us new wares, and therefore demand from us a stricter attention—a more generous construction—where we see in them "good thought," even if inadequately expressed.

Besides, in art, the seeing makes the sight. Most good pictures are of infinite suggestiveness; nor is the artist bound to have intended all the effects the exercise of his special gift produces on other men. For the works of a true artist have this in common with the works of nature, that they are of universal speech and relevance, having besides a meaning and language of their own, known only to the maker of them. Therefore, having recognized in any work the presence of that mysterious and divine intelligence which we call imagination, it is pleasant to give ourselves up to the impressions produced by it, reserving criticism of its faults and shortcomings (if it should not reach to our ideas) for some other time; surely our dull climate affords many a grim day for such a purpose. Not that we deprecate criticism—especially technical criticism—between artist and artist. But now and again we think it well to be pleased by what is well done, and to leave what is ill done out of the question.

This preface is to excuse beforehand a criticism which is to be almost all praise, and deprecate the just wrath of those righteous ones who would have offenders punished, whatever else befall. And first we will praise the pleasant room, not too large, and clearly lighted throughout. This exhibition has quickly earned popularity with all men who have work to show, but have not yet attained a place in the secure niches of the established societies. And here, more than anywhere else, we may look for signs of the tendency of our school, since the gallery is chiefly filled by the works of young men, of whom many are still in pupilage to some great enthusiasm for the works or teaching of one or other of the masters of the art. And from the direction this admiration most generally takes, we augur of the future of the school. And we think we may congratulate ourselves (who are dependent for so much enjoyment upon the rightness of this choice) that the pictures about us offer a striking proof that art is making steady way in England. Everywhere among them we find evidences of the right thing having been tried for: meretricious prettiness and facile sentiment are more rare than in many collections of greater renown. On entering the room, almost every one must be struck by the general harmony of colour resulting from so many well-toned pictures; and, on examining them more closely, one sees at once that they are almost all founded upon some scheme of effect, oftentimes novel and beautiful, and always applied from nature.

Here we will diverge for a moment to point out the influence for good the study of the art of the Chinese and especially of the Japanese (those masters of effect and colour) has had upon our school. This, we can imagine, may appear paradoxical to those who only see distortion and quaintness in the work of these ancient peoples; but we are sure of our ground in appealing to all serious students of art to bear testimony to the value of their teaching.

And now let us see what we may find in the pictures, wandering about from one to another without any guiding plan of examination, and acknowledging once for all the merit of many we leave unmentioned. Here, for instance, let us look at Mr. Poynter's "Snake-Charmer" (No. 586). Mr. Poynter's pictures are always among the most interesting in any exhibition. There are few men in England who could have drawn and designed a picture like this with such certainty and intelligence. It is full of knowledge and original study. The snakes glide and flow round the dancing feet in real snake lines. The orange drapery is admirably planned and painted, and the round limbs of the girl are of exact truth. Then, how good are all the details of the scene. Observe the pretty shape of the fuming incense-pot; and again, the bright butterfly, a beautiful half-thought and a most skilful invention of colour. Mr. Poynter has another picture here (No. 313) of a great curve of coast, beset by a gusty flaw of wind and rain. This is is a wonderfully true effect of rent

grey sea and flying rain. Beyond the shower one sees the fair weather, but glimmering very pale and far away. Especially to be admired is the drawing of the surf line clinging round the low green headlands and darkened hills. It would be pleasant to have this picture of the fresh west wind in one of our gas-dried London rooms. But there is another picture of Mr. Poynter's that we should also like to hang up in some pleasant corner near a window. It is only of a cat stealing across a quiet gravelled walk, but it reminds one of so many pleasant country sights and sounds, that one becomes dreamy and idle merely by looking at it.

Let us pass on to Mr. Goodwin's "Grey Day in Yorkshire" (No. 238). It is a good example of this young artist's serious power. If we miss some quality of high idealism in his work, we find in it evidence of an unusual grasp of the facts of nature, and of an almost passionate delight in their representation. The blots and lines of colour are placed firmly where they are to take their part in the effect, and with a certainty very unusual in so young an artist as we understand Mr. Goodwin to be. The tone of all his pictures is rich and powerful, and, in this one particularly, is of admirable truth. The scene is only a little pool among the Yorkshire hills—one bank wooded, the other green sedge and peat-land. We can see it is summer there now; but it is a place more known of the winter. The trees under their robe of leaves are knitted and braced against the strife of the moorland winds. In the deep green of the heavy grass the feet of the heron plash cool when the hill-sides are hazed with heat. Hither come few men, or creatures that dwell with men; the cry of the wild birds or the sound of the sighing wind that brings up the cold grey shower are the voices that befit it best. It is a place that reminds us that nature can get on very well without us and was not only made for our beholding. In all his work Mr. Goodwin seems to choose this side of nature: it is a great and solemn one.

Now let us look at Mr. Ditchfield's pretty idyls. He seems enamoured of fair lawns and the quiet of green places. There are no brambles, or poor folk, or bluebottle flies in his lands. They are really sweetly pretty places, and we imagine that, perhaps, if we had very pink cheeks and a nosegay in our button-hole, and a lovely young lady with still pinker cheeks to make love to, and if we were both of us painted upon a fan, we might some day be accounted fit to dwell within their borders. As it is, Mr. Ditchfield must pardon us for only taking in them a sort of fanciful interest. They must be views in the "Pays du tendre," and we should like to have them as such, particularly as there is great skill in their execution. Let us go back again, however, to waters that drown and airs that stir with storms sometimes.

Mr. Arthur Severn's "Moonlight on the Seine" at Paris (No. 248) is a fine and largely-treated study of night. The strong river and the white glittering town are sunk deep in the shadow. There are no lamps alight, for it is late, and soon it will be day again, and the truce of night will be over. Meanwhile the moon passes above the great city, making to herself a pageant of the silver clouds, and, one might think, reclaiming the spot for nature, minded, by the silence, of the time when no man dwelt by the marshy river and the wild swan built among the reeds of its islands. Many a sight of misery and wrong has she seen since that ancient time; and one fancies she must mostly love the quiet pauses of the world when men and their works are still, and are as if they were not. To our minds this picture will bear out all this interpretation of its sentiment; and it is pleasant to find that on the side of art it is sound and learned. The drawing of the sky is very fine, and the great lines of the picture well composed. The tone is good—if not exquisitely so—and the colour of the halo round the moon very delicately caught. It is well and vigorously painted, and seems done with one impulse. Mr. Severn has other works here, and we advise our readers to study them to find what may be found therein; for Mr. Severn has the gift.

Mr. Henry Moore's "Strenshall Moor—Mid-day" (No. 326) is a very beautiful sketch. There is a sense of stir and gladness in it. The scene is wild but not unkindly. One sees that the afternoon will be fair after the showery morning. There is nothing in the gallery more excellent for natural and delightful colour than this picture, and we would call the attention of amateurs to the power of right tone to harmonize all tints and dignify the most commonplace subject.

"Old Morton Hall, Cheshire" (No. 377), painted by Mr. Walter Crane, must be a delightful old house, and Mr. Crane has evidently felt it to be so. The picture is also noticeable for the clever use made of a black-and-white cow, to repeat and carry through it the black and white of the old stud-work house. If the sky were a little sweeter in colour, we should class this work very highly.

Of Miss Spartali's three pictures, we like that of the "Lady Prays' Desire" (No. 606) the best, in spite of the somewhat weak drawing. It is throughout imbued with high sentiment and most noble grace. See, for example, how the delicate hand is placed against the cheek. The colour also is of such unusual harmoniousness, that we pass over the slight unskilfulness of execution, and will only say that we trust this young lady may soon attain the mastery in her art that her genius demands for its expression.

Mr. Ford Madox Brown's large work, which he calls "Cordelia's Portion" (No. 249), is undoubtedly the most noteworthy figure picture exhibited here. It illustrates the line,—

"The truth, then, be thy portion."

The true dramatic crisis has here been taken, when Cordelia, conscious of powerlessness to defeat the plots of her sisters, adheres with despair to her foolish quibbling answer, like some gentle creature that cannot strive.

Here is a great subject, and, we venture to say, greatly treated. Of its faults we will respectfully

speak presently, but for the present let us consider the intelligent and skilful arrangement, the lovely colour, the wonderful expressiveness of the heads, the delicate inventive detail. Cordelia is one of those typical characters for which each man finds an embodiment according to his experience and idiosyncrasy; and so, if one is pleased to say this is not the Cordelia of his own musings, we feel that the question does not admit of argument, and would therefore only point out that this figure represents the agony of a creature fine and gracious, firm to bear, most gentle to protest, of few loves, but many charities, of clear wise counsel, but of little craft. And such was Cordelia. If you think she had blue eyes, not brown ones, or that her hair was of a paler gold, or that it fell in simpler braids; if there are these or a hundred other differences between your conception and the artist's, you may object: but the character of Cordelia, we aver, is here adequately embodied. About those of the other personages, no attentive person can be in doubt. Lust, cruelty, craft, pride, all furious hates, make pale the face of Regan, and burn in the fierce eyes of Goneril; see, too, her fleshy white arm and sensual hand. Albany is noble by contrast, and is, perhaps, the redeeming point in this part of the picture as he is in the play; and Lear, with the coming madness gleaming in his eyes, is again a great study of character. He is arrogant and self-willed, for he has long been a king. Brave he is, and somewhat cruel; violent, but not vindictive. You can find no lines of cunning in his gaunt face, all haled by weather and fierce feasting. That he should not do what he would, bewilders him. You see him here blinded by rage against the inexplicable opposition to his pleasure that Cordelia's misunderstood answer has raised up. His eyes do not see in her his daughter, but a stumbling-block to be cast out of the way. His strong hands would smite her, if so weak a creature could stand at bay. Albeit, he is not wont to be harsh to the feeble, and —if we may judge from the vigorous eyebrows and large mouth—he, too, "has knowen love and his service," as Chaucer says.

There are, no doubt, things in this picture which require some explanation. Why, for instance, has the nose of the child been snipped off by the frame? But probably the artist who has carried so fine a work to such a point had some good reason for this. As to the colouring, there can only be one opinion of its technical perfection. It may be reasonably held that, in such a scene, the embroideries and details would be little noticed, and that, in representing such extreme emotion, it is right to follow this natural law of perception, and even to force the face and hands of the personages into a prominence which all who have witnessed any great crisis of human life remember to have been its most striking characteristic. Mr. Brown has not chosen this effect, and we must take him as he comes before us. There is gain in beauty of colour and interest of detail, by the treatment he has adopted. How lovely the clear green of Cordelia's robe. How rich the black and orange striped robe of Regan, and how inventive the varied black of her hair folded into the bosom of it. The head of Albany is fine in colour also; and if the arm of Goneril is not very well drawn, it is very fair. All through the picture there are beautiful inventions of ornaments and patterns, and a power of realizing the costume of the remote time to which the story belongs. We could write much more upon this subject, but we think we have said enough to send our readers to the picture itself. If, having seen it, they do not like it, we feel that no eulogy of ours can change their opinion; for Mr. Brown's work has no conciliation for a hostile critic: we know of none that excites greater opposition; nor is any a more constant source of delight to those who do admire it.

In great contrast to the passion and dramatic intensity just described is Mr. Field Talfourd's very lovely idyl of the "Summer Sea" (No. 215). Here everything is of the simplest. There is no more work than just explains the effect. The subject is only an old boat drawn up upon the sand, under a low bank—and the sea. And yet it is perhaps the most suggestive work in the whole room. In the first place, it is really simple. Simplicity is a quality so often affected, that one begins to suspect the word; but true simplicity is one of the greatest qualities a work of art can possess, and can only be produced by clearness of idea, complete design in colour and composition, and a mind capable of harmonious thought.

If you examine this little picture, you will begin to perceive how many things might have been put into it which are not there. It seems impossible to have escaped sea-gulls, or distant cottages, or fishermen, or (more dangerous still) their children. Why is there nothing but this old boat and the pausing sea? Without a guiding idea, such a picture could never have been composed; no canon of taste could have taught the artist that these simple lines are all that are required. Now that it is done, we know that any living object, or object suggestive of neighbourhood, would have disturbed the mute companionship of boat and water, as they take their ease in the summer calm. There is something very touching in this sturdy little boat, lying at the edge of all the great sea, nearly within reach of the soft foaming and warm shallows of the waves. The sky also is at rest; the small clouds and films of haze are, for the moment, anchored in the fair blue weather that shows between the banks of heat-fog. All the artillery of tempest is there; but it is the armistice of summer. This picture is charmingly painted, with few colours, and apparently few touches. The warm haze is wonderfully true, and the loose sand-bank exactly right in hue. Mr. Talfourd has never, we understand, exhibited landscapes before. The loss has been ours.

AN HERALDIC PUZZLE AND ITS SOLUTION.

By G. Chapman, F.S.A.

WHEN we visit the collections of a large National Museum we usually come away with a general idea of the whole, but rarely with a clear notice of any one individual object. Each specimen has probably, however, its special interest if properly studied; and, as an example, the reader is invited to bestow his attention for a time upon one single article, among the almost countless treasures now exhibited at the South Kensington Museum.

The object we select is a small metal box, covered with enamels, of which the accompanying coloured drawing affords a most faithful representation. Placed as it is in the crowded cases of the Museum, the eye of the visitor rests upon it for a moment, and passes on to others, little knowing the interest that it would yield if its history were worked out, — a threefold interest — Heraldic, Historical, and Artistic.

And here we digress for a while to remark how little justice is commonly done to the study of heraldry; its real importance in history, genealogy, and other kindred subjects, being generally overlooked, and its follower being accounted a mere trifler in a pretty, amusing, but very useless study. A most instructive essay might be written in refutation of this popular error. Perhaps the present article may be regarded to some extent in that light; an apology for the study of heraldry!

It may first be mentioned that reliquaries, or ecclesiastical caskets of Limoges enamelled work, of the thirteenth and fourteenth centuries, are of frequent occurrence; but that domestic caskets (jewel or money-cases), of which the present is one of the most beautiful and valuable of the period in existence, are much more rare.

The dimensions of the casket are as follows:— 7 inches wide, 5 inches from front to back, and $2\frac{3}{4}$ inches deep, on legs $\frac{3}{4}$ of an inch long; so that it stands in all $3\frac{1}{2}$ inches high. It is of copper gilt, entirely covered, as is seen, on the top, front, back, and sides with coats of arms in enamel, arranged in the manner that was anciently termed *diaprée*, or lozenge-wise.

The number of different coats of arms is six, with a portion of a seventh, probably a mistake of the enameller. They are repeated all over the casket, each occurring thirteen or fourteen times, in all 79 coats.

The arms are now considered to be as follows; the chief doubt having been as to the sixth :—

1. *Valence.*—Barry of twelve argent and azure, an orle of martlets, gules.
2. *Engolesme or Angoulême.*—Lozengy or and gules.
3. *England.*—Gules, three lions passant gardant in pale or.
4. *Brabant.*—Sable, a lion rampant or.
5. *Dreux, Brittany.*—Chequy or and azure, a bordure, gules, over all a cantar ermine.
6. *Lacy, Earl of Lincoln.*—Or, a lion rampant purpure.
7. ————.—Azure, a lion rampant or. This occurs once. No such coat is known, and it is, doubtless, a mistake of the artist for No. 4, Brabant.

Having determined to whom the coats of arms belong, we pass on to the most interesting consideration of all,—the historical associations of the casket. The reader will not fail to see that, in order to identify the person for whom this casket was made, it is necessary to find some one who, if not actually entitled to quarter all these coats of arms, was connected, by marriage or otherwise, with all these noble families, and would, therefore, not hesitate to place them together on a monument, casket, or the like. This has been the puzzle, and many have been the unsuccessful guesses at its solution. Various members of the different families have been thought of; but, on closely examining their pretensions, some flaw was discovered in their title to the original ownership of the casket,—till at length the riddle was read, and a claimant uniting all the requirements was found in the person of William de Valence, Earl of Pembroke, son of Isabella of Angoulême (widow of John Plantagenet, king of England), by her second husband, Hugh X., Count de la Marche. To show this, it becomes necessary to sketch her biography and connexions.

Isabella of Angoulême was the only child and heiress of Aymer, Count of Angoulême, surnamed Taillefer, the vassal of John, King of England and Duke of Normandy and Aquitaine. She was, when a child, betrothed to Hugh de Lusignan, surnamed Le Brun, the eldest son of Hugh IX., the reigning Count de la Marche, fellow crusader with Cœur de Lion; and she was, agreeably with the custom of the times, consigned to his family for her education.

Chancing to meet her liege lord, John King of England, on one of his occasions of visiting his French dominions, he was much struck with her great beauty; and she, seeing him captivated, and being carried away by the flattering prospect of so grand an alliance, refused to acknowledge her marriage contract with Count Hugh, and was married to the king at Bordeaux, on the 24th August, 1200. She bore him five children prior to his death in 1216; and the following year she returned to Angoulême; and in 1220, or thereabouts, was after all married to her first and constant lover, Hugh, then tenth Count de la Marche. To

him she bore five sons and three daughters, and died in 1246. He died in 1249.

All the children of her second marriage, except the eldest, who succeeded his father, were sent to her son, Henry III. of England, who provided magnificently for them; and these, his brothers of the half-blood, are connected with most of the grievances of his troubled reign.

The eldest son was Hugh.
The second, Guy de Lusignan, who was killed at the battle of Lewes.
The third, William de Valence, Earl of Pembroke, so well known in English chronicles.
The fourth, Aymer de Valence, Bishop of Winchester.
A fifth son, Geoffery de Lusignan, Lord of Hastings, is mentioned in Speed's Chronicle; but he is believed to be identical with the second, Guy de Lusignan.*

These sons of Queen Isabella were named from their places of birth; those called "de Valence" were born at her lord's castle of that name, the others at his more celebrated castle of Lusignan. William de Valence, and he alone of the sons, so far as we can discover, bore one of the coats on the casket.

Supposing then the casket to have been made for this son of Isabella of Angoulême, the coats of arms placed upon it are accounted for as follows:—

1. Valence.—His own arms. He was killed in France in 1296. His only surviving son, Aymer, succeeded to the earldom, and died without issue in 1323.
2. Angoulême.—The arms of his mother's father, Aymer, Count of Angoulême.
3. England.—The arms of his nephew, Edward I.
4. Brabant.—The arms of the husband of his great-niece Margaret, daughter of Edward I., namely, John, Duke of Brabant, who married in 1290, and died in 1312.
5. Dreux, Brittany.—The arms of the husband of his niece Beatrice, daughter of Henry III.; namely, John, Duke of Brittany, who died in 1305.—
6. Lacy, Earl of Lincoln.—The arms of Henry de Lacy, Earl of Lincoln, who died without issue male in 1312. His grandmother, Margaret de Quincy, married for her second husband, Walter Marshall, Earl of Pembroke, the uncle of William de Valence's wife, Joan de Monchensi.

These facts show, almost beyond doubt, that the casket was made for William de Valence, Earl of Pembroke; in which case we are able to assign to it the date of the latter part of the thirteenth century. It may, however, have been executed for Aymer de Valence, his son; in which case the work would be referred a little later,—probably a year or two after the father's death, or, at latest, to some time before the death of Henry, Earl of Lincoln, in 1312; for, if made for the son, we should assume it to have been by the same artist as executed the famous monument of William of Valence in Westminster Abbey, which is enriched with similar enamels. For the present only, we dismiss the artistic consideration of the casket; its workmanship is undoubtedly French, probably of Limoges; a very fine example of that class of enamels known as *champlevé*. In a future article it is proposed to give an account of the different kinds of enamels, illustrated with drawings; a brief history of the art, and a description of its processes, so far as they are known; and reference will then be made again to the drawing accompanying this paper, when it is hoped that the reader will find the casket yield some further interest.

* See *Art de vérifier les Dates*, ii. p. 383.

LANDSEER'S LIONS.

IN the centre of the great square of the capital of England, in the high place of national honour, round the base of the monument which commemorates the most characteristic achievement of our race, are four great masses of bronze wrought into lions, proud emblems for all future Englishmen, of courage and endurance and stately honour. If we say that we do not think Sir Edwin Landseer, to whom we owe these fine works, has risen to the height of such high argument, we in no way impugn his power to do other things. No man need be ashamed of failure in such an undertaking. It would seem almost as if the creation of great emblems was only possible in certain states of society and to certain races of men. The perfect abstract form of any idea can only be reached when success is the crown of many efforts. One cannot step aside from the ordinary ways of life and say that for a day or a month, or series of months, one will cultivate ideal thought to some special end. When men constantly live in the presence of a spiritual world, where the phenomena of life are habitually regarded as the suitable types of some divine quality, we may hope to find an art capable of clothing an abstract idea in clear, tangible form. In the present day such a thing is almost hopeless, for in this matter taste and knowledge will not serve a man as guides. It is not given to us of the modern time to create such forms as the terrible creature that watches, calm, invincible, imperishable, within the walls of our Museum. Who would see what the terror of a lion is, the terror of strength remorseless and just, may there find sufficient reason for saying that our English lions are not of the greatest art,

nor indeed in any way fit to rank with the works in which national conviction has expressed itself in certain ages of the world. They are lions such as we have seen in our menageries, but not the British lion. Their manes, too, are rather soft and woolly —one does not see those large divisions where, when the great beast frowns, the hair divides and seams. Again, the uniform colour of the bronze does not render the terror of the fangs, and we think the expression of the mouth somewhat grimacing. The muzzle, also, is perhaps a little sharp for so large a work, which must necessarily be seen against a great background of confused objects. The eyes and forehead are certainly imposing, and wonderfully true to nature; the position of the ears forcible and yet unexaggerated, while the drawing of the head and neck generally is very exact. The finest part, however, of these statues is the back and loins; this portion is really grand, and, if the tail had been carried a little more out, would be as perfect as anything modern art has produced. The paws are not successful; they may be true to nature, but they are not right in art. They are not sufficiently modelled or marked, and have a look of being swollen. We fancy, also, that if the place of the claws was more sharply marked, the truth would have been better expressed; for, if we remember rightly, there is a line of dark hair behind the fringe of white in which the claw-sheaths are set. Taking the lions, however, for what they are, we must grant that Sir Edwin has worked here as well as he ever did. They have all his facility, his elegance of taste and sound knowledge of the form to be rendered. The forms are not of that typical perfection which makes us forget the individual. There is an attempt to render them vast by suppression of small details; but this has not been steadily kept in view, and the lines are rather blurred than sublime.

MUSIC AT HOME.

"NOTHING venture, nothing have," is an old saying generally included among the wisest of our English saws. "Fortune favours the bold," is another, and in both of them Signor Arditi and the musical commonwealth, late of Her Majesty's Theatre, must have implicitly believed. Imitating the tactics of the old fighting Romans, they formed themselves into a kind of harmonic wedge, and set about forcing a certain theory or conviction upon the modern Britons, namely, that Promenade Concerts are good for them at any time of the year. With Signor Arditi as "foremost man," this musical phalanx commenced a campaign against British prejudice on Saturday, January 12th, and withdrew from the contest on Saturday, February 16th. The "Orchestral Popular Concerts," as they were termed, were given on Tuesday, Thursday, and Saturday evenings; and if the promoters are not to be congratulated on the pecuniary result of the enterprise, they may be, at all events, complimented upon their courage in taking the theatre and the responsibilities in the face of most formidable opposition. Promenade Concerts do not, and, probably, never will, form part of our Christmas holiday-time festivities; and though the extensive "welkin" of Her Majesty's frequently rang with applause, the equally extensive area was seldom, or never, inconveniently crowded. The first concert was "popular" in every sense of the word. Signor Arditi "contributed" a new polka; a new quadrille on airs from Rossini's *Guillaume Tell;* a new song called "They ask me why," and sung by Signor Foli; and the valse "L'Estasie." The active *chef d'orchestre* scores cleverly, as his valse proves, writes very independently, as his song demonstrates, and, in the course of his quadrille makes musical mincemeat of poor Rossini in the most approved and ruthless fashion. Of a truth the quadrille has somewhat altered since the early days of Musard and his "Echos" and "Danois"! Mdlle. Agliatti, a new singer, "débuted" in London on the 12th, and vocalized at intervals to the end of the brief season. Mdlle. Agliatti at present carols indifferently well, but mademoiselle is young, and in youth there is much promise. Miss Madeleine Schiller, with a delicate touch despite cold hands, and with a heart that evidently warms to the "tchunes" of Hibernia, played Moscheles' "Recollections of Ireland" unaccompanied by the orchestra; and Mr. T. Harper, the champion trumpeter of the civilized world, gave, "by particular desire," Dr. Arne's "Soldier tired." The trumpeter mayhap was fatigued or the instrument refractory, or the crispness and certainty of execution to be expected and desired did not, on this momentous occasion, appear; nevertheless is Mr. T. Harper *the* trumpeter *par excellence.* Signor Arditi treated the benighted Londoners to an orchestral fantasia, "Souvenir d'une Nuit d'Été à Madrid," by the Russian Glinka. The music of the extreme North was put upon its trial at several succeeding concerts, but was found wanting in interest and coherency. The not strikingly melodious "Scythian" found a stanch friend in Signor Arditi, who did all he could to make the Russian's music understood and appreciated. The third "Orchestral Popular" (Jan. 17th) was entirely classical, and eminently acceptable to connoisseurs. Beethoven's Pastoral Symphony, a Scherzo and Finale of Schumann, Dr. Sterndale Bennett's exquisite overture "The Wood-Nymphs," Mendelssohn's violin Concerto (M. Sainton), and Weber's Concert Stück (Miss Schiller),

with airs of Mozart and Handel by Mdlles. Liebhart, Agliatti, and Signor Foli, were all included in the programme. These particulars of two of the "Orchestrals" will prove the vigour of the management. Mdlle. Sinico, and Miss Fanny Jervis, a pianiste of no ordinary stamp, subsequently appeared. At the second classical concert, Spohr's magnificent Symphony commonly known as "The Power of Sound" was performed in a manner not quite intended by the grand old musician.

Ballad Concerts are again in the ascendant, and with them is specially identified Madame Sainton-Dolby. Amateurs were at first sanguine enough to believe that the cause of old English ballads would be advanced at these remunerative entertainments. That musical antiquarian, William Chappell, and his "fellow-student," G. A. Macfarren, have done their duty in pointing out the beauties of the true English school; but concert vocalists apparently find it more profitable to sing the songs of Queen Victoria's time than those of the fifteenth and sixteenth centuries. Madame Sainton-Dolby gave a ballad concert on the 16th of January at St. James's Hall. Whittaker's and Shield's names appeared in the programme for a song each, and Bishop's for two. The very long and dreary intervals between these illustrious strangers were filled up by Nelson, Lemmens, Blumenthal, Claribel, G. Hodgson, Virginia Gabriel, Weiss, Glover, Boscovitch, Lüders, and Miss Philp. Mr. W. Chappell should collect every copy of his heretical book which lovingly proclaims the *old* English ballads worthy of acceptance, and serve them as Don Quixote's clerical friend did his library of romances; for it appears the aforesaid ballads are to be henceforth quietly dropped in favour of modern inventions. Has the hideous and pertinacious spectre which one calls "Shop" nothing to do with the contemptuous ignoring of the national ballads by the singers of the present day? "Once I loved a maiden fair," "Cold's the wind, and wet's the rain," "Ah! the sighs that come from my heart," and such-like, are perhaps very well in their way; but they could not be marked three or four shillings, and are hardly available for the superscription, "Sung by Madame or Miss So-and-so," or the autographs representing so much per copy. Old ballads are, in some people's estimation, "beautiful for ever," like the arch enameller's favoured subjects; but others in genteel life seem to consider them eligible for the kind of treatment old friends sometimes meet with. They may be honoured and appreciated in private, but they must be cut dead or be favoured with the coldest of shoulders in public. It is somewhat hard that the time for cleansing the gems of old English melody from the dust of succeeding ages is so systematically put off, especially as the dust aforesaid accumulates with alarming rapidity. It was originally presumed, and naturally enough, that the so-called "ballad concerts" would rescue some of the loveliest melodies ever written from absolute oblivion; but their mission is apparently the popularizing of a few songs which in ten years will, probably, be remembered to the same extent that Mr. Balfe's *Blanche de Nevers* is now. Real lovers of good music do not sigh for concerts composed of Elizabethan melodies entirely, varied by fantasias on the virginal, but they would be glad to see the relics of antiquity treated with the consideration they deserve. The concert vocalists are perhaps afraid that old and new ballads introduced in equal proportions would result in the humiliation of the former. The old *might* pale before the new, but the experiment would be worth a fair, open, and candid trial.

The admirable Winter Concerts are progressing satisfactorily, and vague rumours are already pointing to the possibility of a new music-room as part of the forthcoming restoration at the Crystal Palace. *Messieurs les Directeurs* will, perhaps, have a little consideration for those unfortunates who do not occupy reserved seats, for their privileges have been much curtailed of late. The "lower fifteen" appreciate a comfortable seat as highly as the "upper ten;" and if any new arrangement may be in contemplation, it is to be hoped the plain "guinea season-ticket" holders may find room to rest and be thankful, and to bless the executive body with as much fervency as they have occasionally anathematized it.

"VENUS'S FLOWER-BASKET."

(*Euplectella speciosa.*)

By W. B. Lord, Royal Artillery.

IT is not among the endless variety of floral gems which deck the forest and the plain, or the glittering ores and crystals of the earth, that our search for forms of perfect grace and loveliness need be confined; and however charming and admirable the wax-like petals and feathery fronds of the choicest flowers of the Tropics may be, or however radiant the mineral from the deepest mine, there are treasures as exquisite as any of them, scattered amongst the teeming gardens, or stored up in the great reef-caverns beneath the rolling billows of the sea.

The sponges, corallines, anthozoa, medusæ, seaweeds, and the countless other productions of the deep, each have their types of beauty; myriads of tiny ocean flowrets and fruitlets hang from rock

Fig. 1.

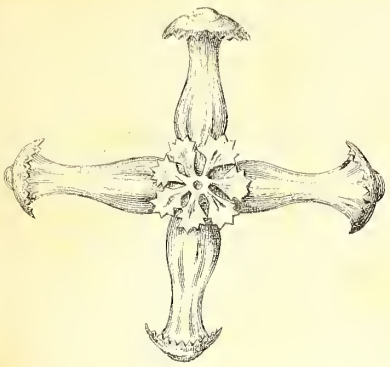


Fig. 3.

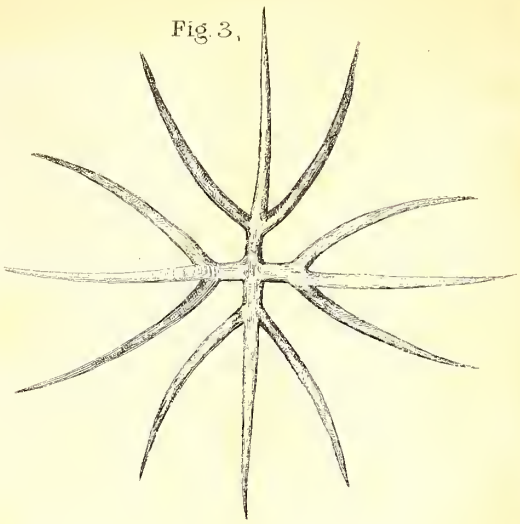


Fig. 2.

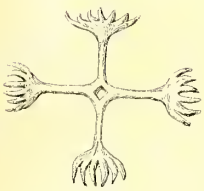


Fig. 5.

Fig. 6.

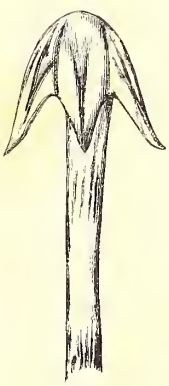


Fig. 4.

Fig. 9.

Fig. 10.

Fig. 7.

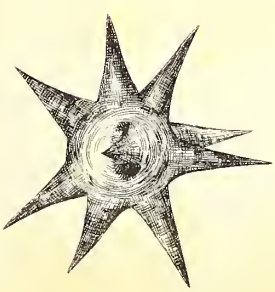


Fig. 8.

and ledge, waving their thousand fringes and gorgeously-shaded tentacles in the deep blue water; whilst fish vying with the rainbow in their radiance of tint and banded beauty, flit bird-like in restless play amongst the ocean leaves and blossoms. Many of the shells and molluscs are so perfect and exquisitely beautiful, that from the very infancy of art they have remained the favourite and unsurpassed designs from which the greatest triumphs of ornamental work have been executed. The wandering explorer and naturalist, who gleans his harvest amongst the reefs, coral sands, and lagunes of far-off islands and little-frequented coasts, like the plant-hunter, who seeks his prizes in the vast forests of distant lands, from time to time lights on some new and unknown marvel of nature's handiwork wherewith to delight not only the scientific world, but even those least susceptible to the charms of nature. Such are the subjects of our illustration, which, being the result of photography, faithfully show the form and structural arrangement of these exquisite sponges (for sponges they are), although the clear crystalline transparency of the lace-like network of which they are built up, as though spun by fairy craft, is such as to defy the efforts of art to represent. Cornucopia-like in form, crowned with a cover of elegant design, they have been appropriately named *Venus's Flower-baskets*, or the *Euplectellæ speciosæ* of the naturalists. This beautiful production is a native of the warm and genial seas washing the shores of the island of Zebu, one of the Philippine group, where it was first discovered and brought to light by fishermen, about a year since, and is said to inhabit very deep water, forty fathoms or thereabouts, where these sponges fix themselves to the sand, or other suitable point of attachment. All the specimens which we have seen appear to have grown on a deposit of coral and shell-sand, and have small shells entangled amongst the mass of fibres at the bottom of the sponge. That they at times attach themselves to other substances, there can be no doubt, as Mr. Wright, of 90, Great Russell Street, to whose courtesy we are indebted for the subjects of the illustration, states that there is now in Germany a piece of timber brought from the island of Zebu, on which are ten specimens,—a rich haul for the fortunate fisherman who discovered it.

The first specimen obtained by Mr. Cumming (now in the British Museum) was both bought and sold by him for £30; others have been purchased at from £10 to £15; whilst of late, from fresh discoveries having been made, they have become comparatively cheaper; but are still costly enough to render a successful search for them highly remunerative. Some specimens we have seen have a portion of the sponge, of a brownish colour, still adhering to them: those in the illustration are the crystal frames only.

No doubt the careful search which will be set on foot by the inhabitants of the coast, when their value in the market is known, will go far to clear up some of the mysteries now hanging round their growth and formation. One of these is the almost invariable presence of the remains of one or more crabs in the interior of this, to them, "*crystal prison*," out of which escape is just as impossible as from a capsuled bottle. Many differences of opinion exist as to the mode by which the crabs first obtained an entrance. There appears, however, little doubt that this is effected whilst the sponge is in an immature condition, and before the cover is woven. There is a young specimen which we have examined in the British Museum in this incomplete state, and it is questionable whether the basket-like tube is ever covered until it has reached maturity, when, although the sponge appears to cease growing in an upward direction, the power possessed by it to secrete the silicious matter of which the network is composed, remains unimpaired; and, like a skilful artisan as he is, he at once repairs neatly such injuries as his crystal palace may sustain.

Dr. Gray has in his possession a specimen in which a repair of this kind has been effected. A hole appears to have been broken by some accident in one of the sides, about halfway between the point of attachment and the crown. A new network of fibres, in bunches, has been substituted for the broken ones, of form much like the original structure.

The peculiar curved or *cornucopia*-like shape usually, although not invariably, assumed by these baskets, has also given rise to much speculation amongst the scientific. Dr. Gray is of opinion that the weight of the crab, when crawling through the interior of the tube, may influence the direction in which the basket is found to incline. He says: "As the crab becomes imprisoned in the cavity, it will be constantly walking up and down the tube to procure food, and by so doing it will most likely bend the tube on one side; so that the free end of the tube may become bent down nearly to the level of the base." Whether is this the true solution of the enigma, or, like the goblet forms of some species and the rounded contour of others, may not the cornucopia form, after all, be that most common to *E. speciosa?*

It appears to be the prevailing opinion amongst the fishermen by whom the Euplectella is taken, and by whom it is known as the *Rigederos*, "that it is the work of two insects (meaning probably the crabs found in the tubes) at the bottom of the sea;" and a French correspondent, in writing recently to the authorities of the British Museum, expresses his opinion that the Euplectella is the work of the crabs.

There are many reasons why this opinion should be received with the greatest caution. In the first place, we know of no crustacean possessing a like power of silicious secretion and construction. Then the crabs which are found inclosed are not always of the same species, or even genera. Dr. Gray is of opinion that one which he examined through the meshes was a *Pagurus*, of which the *hermit*, or soldier-crabs, so frequently found in whelk and other univalve shells on our own coasts, are examples.

On many of the coasts of the tropical seas, crabs

of this description are of a very large size, and unceremoniously seize on any tenantless shell of convenient form they can discover, seeking a new habitation as their growth increases, and leaving the old one for another tenant of less ambitious requirements. Crabs with habits such as these would not fail to investigate a hollow tube of such a tempting appearance as the young, growing, and coverless Euplectella would present; and what more probable than that, as the tube became perfected and the lid partly made, the crab or crabs might still continue to inhabit it, until the orifice being at last closed up, *Cancer* had to remain a captive. His cast-off shells, like old worn-out garments, would remain sealed up with him, and give the idea that many crabs, instead of one, had there resided.

Crabs do strange things at times, it is true, as we shall probably state in a future communication. But a Venus's Flower-basket, we opine, is a work of too high an order for crustacean constructiveness to grapple with. Sponges, on the other hand, we know to be workers in flint of the very highest order; forming perfect tubes as their spicules, the external covering, like that of the wheat-straw or bamboo cane, being of pure silica, and the lining of a material allied to, if not actually, *keratode*, noticed by Dr. Bowerbank, and by him spoken of as "one of the most elastic and durable animal substances." No combination of material could be more perfect and comparatively indestructible than this, combining, as it does, extreme flexibility with an almost indestructible surface.

The silicious material of which these crystal-like tubes are composed is deposited in a series of concentric layers round a central tubular cavity, which gradually grows less as the spicules arrive at mature growth (*vide* fig. 9, plate 2, which represents the adult or full-grown specimen of *Spongilla fluviatilis* under the microscope, after having been subjected to heat, in order to char the contents of the interior, and so make them more evident).

Fig. 10 shows a portion of a young and immature specimen from *S. lacustrinus*, treated in the same manner in order to show the greater size of the internal cavity and membrane lining it. The researches of Dr. Bowerbank, to whom we are indebted for our microscopic views, go to show that the silica is secreted by a double membrane, the inner surfaces of each alike possessing secretive powers. It will be seen that the Euplectellas are not the only sponges by many which secrete this curious flinty material, at times elaborated in the most beautiful and curious form. Fig. 1 is from *E. aspergillum* (Owen); fig. 2 from a species of *Euplectella* deposited in the museum of the *Jardin des Plantes*, Paris. Fig. 3 is also from *E. aspergillum*: whilst the curiously-hooked double grapnel or anchor form of spicule found in fig. 4 is from an undescribed sponge found on the coast of Sicily. Fig. 5 is from *Halichondria incrustans*; fig. 6 from a spongeous mass found about the base or roots of *E. Cucumer* (Owen); fig. 7, from *Tethia ingalli* (Bowerbank); fig. 8, from *T. robusta*, an Australian sponge.

The form of some of these, especially that of fig. 3 and the two latter, are such as to make us devoutly thankful that these highly useful creatures the sponges confine the manufacture of their spicules to microscopic minuteness, or using them for toilet purposes would be anything but an agreeable operation; but flint is not the only material of which a number of very curiously formed spicules are formed; some sponges are most abundantly furnished with them, but composed of carbonate of lime. It has been, however, observed, that although certain sponges have their surfaces covered with the carbonate of lime material and their interiors literally crammed with silicious spicules, they do not naturally accompany each other, and are not secreted in common. The forms of the sponges of commerce are too well known to need description, and although the life of a sponge may be a matter prosaic in the extreme and utterly devoid of the sensational element, there is much in it to interest the thoughtful observer of nature. Sponges are generated by what are called gemmules or minute atoms of gelatinous substance formed in the interior of the parent. These, as the flowing tide is absorbed and again expelled by the countless orifices or *oscula* which cover the surface, are borne away with it, in association with the thousands of minute atoms from which the nutritious particles or organisms have been strained by the perfectly-formed structure through which they have passed. These tiny sponge-seed are in some species covered with minute cilia or hair-like down; others come forth mere gelatinous atoms, but possessed of rapid locomotive powers, moving here and there with surprising agility and speed. These after a short time become attached to a favourable object; their secretive members are formed, and they remain, unless disturbed, in the position in which they first established themselves.

There are two theories to account for the absorption and expulsion of water by the sponges. That of Dr. Grant favours the belief that the vast numbers of moving and vibratory cilia lining all the canals and cavities and bending their tiny arms like waving corn, thus set up a disposition in the water to flow ever onward through them. Dutrochet, however, attributes it to the law of *endosmose*, a very familiar example of which may be found by filling a common bladder with carbonic acid gas, when, after a short time, the gas, although of much greater weight than atmospheric air, will pass through the pores of the bladder and admit air. We leave the reader the option of selection between these theories, contenting ourselves by repeating that the sponge is fed and nourished by that which the flowing tide brings within the reach of its influence. Unlike the Actinia and some other stationary inhabitants of the deep, it has no arms or tentacles with which to reach forth and secure its prey; therefore it makes of itself a living filter. The sponges, as a rule, are marine productions,

although there are certain kinds found in fresh water. Like many other inhabitants of the deep, the sponges thrive best in the warm genial seas of the tropics, and perhaps in no part of the world are they to be found in greater variety and perfection than among the Australasian islands. The West Indies and the Mediterranean also yield them in considerable quantities; those of commerce being chiefly from the two last-mentioned sources. Our colder seas, although containing their sponges, are by no means rich in them. Dr. Bowerbank enumerates twenty-four genera as being found on the shores of Great Britain. These differ much from the huge *vase* or *chalice*-shaped Pin sponges (*Raphidophora patera*) found in the Indian Ocean. We have seen some of these which would readily hold from three to four gallons in their cup-shaped cavities. Venus's fans (*Gorgonia flabellum*) are there, too, found on the coasts of Bermuda, large enough for the toilet-table of a giantess, and fit companions for the huge sponge goblets above referred to. The sea-feather, or *plume coral*, is found sprouting, like some ocean fern-leaf, from the rock-cave's edges, far down in the clear, tranquil water, amongst the reefs, and we shall see how one of them proved a guide to fortune, station, and nobility. Thus goes the tale, which, unlike many such, has the inestimable advantage of being strictly true.

In the year 1650, one Phipps, a blacksmith of Pemaquid, in New England, was blessed with a son, who was christened William, and who, in very early life, manifested much ingenuity and a passion for ship-building. Very shortly after the term of his apprenticeship to a shipwright had expired, he built a vessel for himself, which he navigated in person, and hearing it reported that a Spanish merchant ship freighted with bullion had sunk in the neighbourhood of the Bahamas, he at once betook himself to the scene of the disaster, and made the most determined but fruitless efforts to recover the lost gold. Treasure-seeking now appears to have become a fixed occupation with Captain Phipps. In the year 1683 we find him employed by the English Government to discover another lost Spanish ship of immense value. This he failed to do, but was convinced that perseverance in the search would be ultimately crowned with success. For five years he was unsuccessful in his applications for funds to renew his investigations, when the Duke of Albemarle, the then Governor of Jamaica, not only believed in the assurances of Captain Phipps, but furnished him with ample means and fitting apparatus for his new expedition. How he reached the scene of his labours; how every lagune and gulf between the reefs was searched in vain, until hope well-nigh vanished, we need not dwell on here. No wreck could be discovered, and he had almost determined to abandon the undertaking in despair, when, after a day of more than ordinary fatigue and anxious exploration amongst the coral rocks, his boat's crew were rowing him slowly and dejectedly back to his ship, one of the sailors directed his attention to a beautiful *sea-feather* growing from the ledge of a sunken rock. "Alas!" said poor Phipps, "there is a sea treasure indeed, I wish I could get it." One of the good-humoured black divers who accompanied him, anxious to oblige his commander, shot rapidly down to the coveted specimen, and just as rapidly returned with it, exclaiming, "*Feather safe, fine feather; but plenty big cannon down where feather live.*" This report, as may be readily imagined, made the sinking heart of poor Phipps leap again. Blackey was despatched to the regions below to have another look, and returned with the glorious news that there were "*plenty big boxes too, and lots of this,*" exhibiting his hands filled with silver. Now the captain was in his true element, and there lay his work cut out for him. He was quite equal to the occasion, for from that deep gulf, far down among the corals and the sponges, where it had lain concealed for more than half a century, he brought to light thirty-two tons of silver bullion, besides large quantities of gold, pearls, and other valuables. We find that Phipps was knighted by James II. He was also appointed sheriff of New England, and took command of a large expeditionary force against the French. We afterwards find him in command of a fleet fitted out to oppose the French in Canada, and subsequently taking part in the border warfare of the period, as a leader of note. And at this point of his career we bid adieu to Sir James Phipps, and the *feather* which led him on to fortune.

Amongst the endless objects of interest which each hour passed on the sea brings to notice, few are more curious than the family of *Medusidæ*:—

> "There's not a gem
> Wrought by man's art to be compared to them;
> Soft, brilliant, tender, through the wave they glow,
> And make the moonbeams brighter where they flow."

The rippling waves as they divide beneath the good ship's cutwater, the dipped oar-blade, and the fisher's net, glisten in the moonlight like molten metal, and the boat's track is marked out as in liquid fire. We are passing through myriads of *Noctiluca miliaris*, members of the order we are glancing at. From the most minute and microscopic size to the most gigantic dimensions do these strange organisms exist, and there appears no known limit to the vast size to which they can grow in the tropic seas. The ponderous jelly-like masses at times cast by storms on our coasts, or left by the receding tide on our beaches, are as mere pigmies to the huge creatures of this class found in the Indian seas; and if northern latitudes were as congenial to their rapid and prodigious development as the warmer seas of the East, the *kraken* might not prove as great a myth as has been generally supposed. Thus Mr. Telfair writes of one he saw washed on shore near Bombay, in 1819, which, as he says, must have weighed many tons:—"I went to see it when the gale had subsided, which was not for three days after its being cast upon the sand; but it had already become offensive, and I could not distinguish any shape. The sea had thrown it high above the reach of the tide, and I instructed the fisher-

men, who lived in the immediate neighbourhood, to watch its decay, and if any osseous or cartilaginous part remained, it might be preserved; it rotted, however, entirely, and left no remains. It could not be less than *nine months* before it entirely disappeared, and the travellers were obliged to change the direction of the road for nearly a quarter of a mile, to avoid the offensive and sickening stench which proceeded from it." Vast fields of medusæ are at times encountered at sea, extending for miles in every direction.

We have had an opportunity of sailing through some of these vast assemblies, and examining them. On one occasion, in the Indian Ocean, we encountered incalculable numbers of the red species, the "*Brit*" or "*Bret*" of the whalers. Nearly the whole of one day was occupied in passing through fields of these curious organisms, whilst the whales, who were following up and feeding on the floating millions, came up to blow in all directions around our ship, tossed their flukes in the air, and resumed their banquet, regardless of our close proximity.

Dr. Scoresby has made a curious calculation in order to show the innumerable number of medusæ at times found inhabiting comparatively limited spaces of ocean. He says, when speaking of a specimen of olive-green sea he was engaged in examining:—"The number of medusæ in the olive-green sea was found to be immense. They were about one-fourth of an inch asunder; in this proportion, a cubic inch of water must contain 64; a cubic foot, 110,592; a cubic fathom, 23,887,872; and a cubical mile about 23,888,000,000,000,000. From soundings made in the situation where these animals were found, it is probable the sea is upwards of a mile in depth; but whether these substances occupy the whole depth is uncertain. Provided, however, the depth to which they extend be but 250 fathoms, the above immense number of one species may occur in a space of two miles square. It may give a little conception of the amount of medusæ in this extent, if we calculate the length of time that would be required, with a certain number of persons for counting this number: allowing that one person could count a million in seven days, which is barely possible, it would have required that 80,000 persons should have started at the creation of the world, to complete the enumeration at the present time.

Some species of these strange organisms, as the *Acalephæ*, or sea-nettles, possess the power of stinging severely those who incautiously handle them. Some are remarkable for the length and beauty of their long twining tendrils and delicate crystalline fishing-lines. "*The Portuguese man-of-war*," in all her grace and loveliness, lures us on to voyage with, and gossip about, her, but the task, although a pleasant one, must be postponed until our next expedition to the gardens and pleasure-grounds of the sea.

REVIEWS.

India, Ancient and Modern. Delineated in a Series of Water-colour Drawings made on the Spot by William Simpson. The literary portion of the work by J. W. Kaye. Day & Son (Limited), Gate-street, Lincoln's Inn Fields.

TO the student of the beautiful the first views of India must be full of delight. He may imagine himself to be transported to some realm of enchantment, as he finds himself, for the first time, among the vivid verdure of the fantastic tropical foliage, or opposite the graceful dome and slender minarets of some fanciful Eastern edifice. Both nature and art are here adorned in fashions, charming in themselves, and interesting from the completeness with which they differ from those of the Western world. The broad-leaved plantains, with their clusters of yellow fruit, the fan-like palms, the tall cocoa-nut trees, the feathery bamboos, the wide-spreading banyans, almost resembling the Druidical oaks of old England, with their dark twisted tendrils drooping, like bewitched rain-drops, to the ground,—the tamarinds, guavas, and hosts of other trees, present to him Dame Nature in a dress totally new to him; unless he has studied the specimens in the palm-house in Kew Gardens, or in that which was the pleasant tropical compartment of the Crystal Palace. Then, as he comes upon a little temple nestling in a grove of trees, from whence fly bright green parrots scared at his intrusion; or approaches the grander structures of Eastern art, with their airy forms and delicate embellishments, or massive proportions and quaint ornamentation, he will understand how widely the fancies of man's mind are varied by local influences. As he penetrates into the narrow streets and bazaars of the towns, under the carved balconies and fretted work of the flat-roofed houses, he will not perceive the slightest vestige of European manners. Every sight, sound, and smell will be essentially the property of the East; and even the method of sitting adopted by the natives will appear particularly strange to him, as they neither sit upon chairs like ourselves, nor cross-legged like the Turks, but squat upon their ankles after the fashion of monkeys. And it is decidedly mirth-inspiring to the new arrival, to see two of them thus sitting together in one of the low stalls of a bazaar and chatting volubly, while they negotiate the sale of grain, or of an earthenware pot or shawl; or while the one, in his capacity of barber, is occupied in shaving the head of the other, leaving only the tuft of hair by which the angel is eventually to convey him to Paradise.

The crowds in the streets will be in numerous and picturesque varieties of Eastern costume. Some will be attired in tawdry silks and brocades; more will be dressed in white or coloured cotton, with turbans and red slippers; more will be black and naked except a scanty covering round the waist. Then there will be Baboos, or Hindoo gentlemen, frequently employed as scribes and the like, in long white robes, with their heads only covered by their own short, curly black hair, and their bare dusky legs and feet in European patent leather shoes; Parsees with their eccentric chimney-pot-resembling head-pieces; women with rings through their noses and heavy silver ornaments on their arms and ankles, dressed in a style

which renders them like perambulating bundles of old window-curtains; none but women of the lowest class, and those generally old and ugly, being permitted to be seen abroad. Then, perhaps, he may meet a cavalier in a combination of snowy-white and gay or gorgeous garments, mounted on a saddle like those used in an English circus for the daring feats of horsemanship, on a white horse with his nose, hoofs, mane, and tail painted pink; or a native conveyance resembling a gig with an awning, covered with bells and jingling ornaments. Rude carts, drawn by bullocks, will nearly block up the narrow thoroughfare, and the *tout ensemble* of the scene will be completed by the creaking of the ungreased cart-wheels, the incessant beating of tom-toms, ringing of bells, and Babel of voices; with odours of burnt wood, rancid oil, and stagnant ditches. The romances of the "Arabian Nights' Entertainments" will be recalled to his mind, and afford him a glimpse of the inner life of this new world presented to his notice, and he may rejoice in being perfectly rid, for a time, of black hats and crinoline.

Even if, however, he seeks the European habitations, he will still find much to astonish him. He will behold well-appointed English carriages driven by native coachmen in Eastern costumes; and, up country, the European bungalows, with their high-thatched roofs, painted clay walls, and verandas are sufficiently characteristic. Indeed, existence would be impossible in such a climate without considerable modification of our English manner of life. At Meerut, for instance, which is a large station in the North-west provinces of Bengal, at nearly a thousand miles' distance from Calcutta, for eight months in the year the sun renders imprisonment in the house compulsory from about seven in the morning till six in the evening. It is possible, certainly, to struggle through the scorching heat, with a pith hat, two or three inches thick, upon the head, and an umbrella; and, under the influence of strong excitement, men have been known to brave the effects of the sun with impunity; but confinement to the house must be the normal condition. Here, in the season of the hot winds, the air comes from the arid deserts of Caubul, like the blast of a coke-furnace when the door is opened, at times laden with storms of hot and penetrating sand. But the window-sashes are removed and a species of mats called khuskus-tatties substituted for them; through which, kept constantly damped by water thrown over them by the bibisti, or water-carrier, from his pig-skin, the air blows into the house cool and fresh. When rains succeed, for a brief interval, the air is deliciously cool and fragrant. The parched vegetation springs up to luxuriance in a single night; but myriads of reptiles and insects likewise rejoice in the change. Black ants half an inch long, with curly tails, overrun the bath-room; another species of ants take wing and, in numbers, terminate a short existence by immolating themselves in the candles or soup at dinner. Centipedes drop from the roof of the veranda, snakes make morning calls, and nature generally awakes to diverse existence, in which the Briton appears in the light of an intruder into a domain the inhabitants of which exhibit their animosity by tickling him in the shape of flies, stinging him as mosquitoes, and alarming him as venomous reptiles.

A lady in England would probably make strenuous objections to the presence of little green lizards and bloated spiders, with hairy legs, on the walls of her drawing-room; but in India, their society is welcomed for the havoc they commit among the mosquitoes and flies. The almost imperceptible white ants, as is, of course, well known, will eat anything, from boots to lath and plaster; and in an old bungalow inhabited by the writer of this article, they actually excavated their way up a door-post to the height of about six feet, and then cut through the woodwork and constructed a kind of hanging-palace of earth, some three inches in length, and one in thickness, in which they deposited their king and queen, two fat white grubs, of half an inch in length. Then there is the notorious musk rat, which, by simply running over a securely corked and sealing-waxed bottle of wine, can impart to it such a disgusting flavour of musk as to ruin it entirely. Add to all this insect and vermin life, the packs of ill-bred and mangy curs which infest the villages, and the multitudes of hawks, vultures, and carrion birds of divers kind, which swarm in the neighbourhood of the abodes of men, and kindly supply the want of drainage, and it may be conceived that nature in India is exceedingly animated. To the hot winds succeed long months during which the air is so stagnant that it seems scarcely possible to breathe, unless it is put in motion by the punkah swaying from the ceiling; when even an ordinary sheet is too heavy a covering as slumber is courted at night, and loose trousers and shirt of the lightest muslin have to be worn instead. But at length the cool weather comes, when with a puggeree, or cloth bound like a turban round the wideawake hat, the sunbeams can be endured, and Anglo-India arises from summer torpor to balls, races, theatricals, and dinner parties. Then may the traveller betake himself to view those grand old edifices, which Moguls and Rajahs have left to attest their magnificence; and cities such as Benares, Delhi, and Lahore, where palaces and temples for the living and shrines for the dead vie with one another in costliness and beauty.

The scenes of Bible history will be vividly brought to his recollection as he journeys through the country. The rude agricultural implements, the yokes of oxen, the wells from which water is drawn in leathern buckets by the hand (pumps as well as drains being unknown luxuries in India), the women on the housetops, the process of two women grinding at the mill, which may be constantly observed in all parts of India, and numerous other customs, are wonderfully suggestive of those pictures with which we have been familiar from childhood, but which appear to be drawn from life so foreign to our own habits. Much of the scenery is extremely picturesque. Sometimes the road traverses richly-wooded tracts almost resembling English parks: then it crosses vast plains, covered with the white rice-harvest or fields of corn, sugar-canes, or tobacco, relieved by villages embowered in groves of palm-trees. Here the men may be seen smoking their hubblebubbles, or rude hookahs, as they loll lazily upon their couches at the doors of their mud huts, or perform their ablutions by throwing water over their swarthy carcasses from brass pots, while their little naked children tumble about in the dust of the road, or stare at the stranger with their great, bright, black eyes. Then, perhaps, we enter the shades of some gloomy forest, whose impenetrable depths harbour tigers, wild boars, jackals, porcupines, monkeys, and various species of deadly serpents, and, again emerging upon open plains, come to the banks of the sacred Ganges, or some tributary stream, where the alligators lie basking in the sun on the yellow sand-banks, and in which to bathe when living, or to be cast when dead, is the most important article of the religious practice of millions. But the old method of travelling through the country by dâk gharrie, or one-horse post-chaise, is becoming as much an affair of the past as the stage-coaches and post-chaises of England. The dâk bungalows, too, or resting-places erected by Government to supply the place of inns, will probably fall into more desuetude than our own old post-houses; for the last can still carry on an impoverished existence by the aid of market-days and commercial travelling. The railways that now run throughout the length and breadth of British India will convey the traveller, reclining too luxuriously to take more than the most fleeting glances at the panorama of varied scenery he is so rapidly passing, from one salient point to another. In fact, we believe that tourists will soon be found to scamper through the more strikingly interesting cities of Hindostan, as through those of the Continent, doing the lions thereof with similar ardour, and contenting themselves with such views of the rest of the country as can be obtained from the window of a first-class railway carriage, when they are not absorbed in a newspaper or book. Now enjoying fresh sensations, now bewailing novel miseries, they will hurry from the holy Benares with its golden temple and celebrated ghauts, or landing-places, on the banks of the Ganges, thronged by their bathing, praying, sleeping, or gossiping crowds, to Cawnpore, with its marble monument over the well of terrible memories; from Agra, with its gem-bedizened Taj Mahal, to Delhi, with its sublime ruins and present grandeur; from Lahore, with its "mausoleums and shrines, magnificent and numberless,

where death seemed to share equal honours with heaven," to Cashmere.

"Who has not heard of the Vale of Cashmere,
With its roses the brightest that earth ever gave,
Its temples, and grottos, and fountains as clear
As the love-lighted eyes that hang over their wave?
Oh! to see it at sunset, when warm o'er the lake,
Its splendour at parting a summer eve throws."

But to pursue the path travelled by Moore's sweet "Lalla Rookh," on her romantic love-errand, it is necessary to get far beyond the range of English mechanical and engineering science. Rugged mountain-passes must be crossed by hard, old-fashioned means of travelling, before the loveliest valley in the world can be reached. But, really, it would scarcely be astonishing, within the next few years, to see the announcement of an excursion Peninsular and Oriental boat, in connection with the railway, dâk gharrie, and palkee dâk, or journeying by palanquin, to Cashmere and back, proceeding thither by Calcutta, stopping at Ceylon for prawn curry and cocoa-nut chutney, and returning down the Indus to Kurrachee.

Meanwhile, however, we are happy in being able to recommend to those of our readers who do not possess the opportunity, or the ambition, to extend their tours so far, yet are interested in this great, glittering Eastern realm of ours, a means by which they may most agreeably gratify their very laudable curiosity. Mr. William Simpson, who recently exhibited at the German gallery, his admirable collection of water-colour drawings of India, Thibet, and Cashmere, is about to publish them, reproduced by the chromo-lithographic process, with an account of the country under its historical, religious, and other aspects; and we cannot conceive anything calculated to give a more complete idea of the scenery and life of our Asiatic dominions than these pictures. A specimen of the forty-two monthly parts of which the work will consist, is now before us, containing six fac-simile drawings, of the full size of the originals, and preserving their brilliance of colouring. We have the "Chitpore Road, Calcutta," a very good specimen of the native part of the town, and affording an accurate notion of Indian customs, from the artistic skill with which characteristic details have been inserted in the picture: such as the man in the corner cleaning his teeth with a bit of stick, and the illustration of the manner in which mothers carry their children. Then we have the "Lanka Cave, Ellora," one of the most artistic of all the excavated works of the Brahmins; and the "Summer Palace on the Lake of Oodeypore," a beautiful structure of white marble, picturesquely situated on an island, to which the Rana goes in state, accompanied by his hareem, in an enclosed barge: cotton-boats on the Ganges, and two scenes of Cashmere life, occupy the remaining places. The style of the accompanying literary portion of the undertaking, by Mr. J. W. Kaye, the accomplished author of "Christianity in India," and the official editor of the Canning, Clyde, and other papers bearing upon the Indian Mutiny, is in every way worthy of the really exquisite sketches it is designed to illustrate. The illuminated dedication to Her Majesty, printed in many colours from an oriental design of rare elegance composed by Mr. Owen Jones, is not the least remarkable feature of the work. Mr. Simpson remained for three years in India, during which he visited nearly every place of interest in the great continent, from Cape Comorin to Peshawur; and some of the picturesque regions beyond the British frontier, as Cashmere and Thibet, as we were informed in the publisher's preface to the descriptive catalogue of his exhibition. He enjoyed peculiar advantages for seeing the country under its most favourable aspects, as he was invited by Lord Canning to join the vice regal camp on the triumphal march through the scenes of the defeated rebellion; during which tour numerous great durbars, or levées of Indian princes, were held, some of which are depicted among his drawings. Altogether, we think that it would be impossible to find a country more adapted for the exercise of the artist's taste and skill, from the beauty and variety of its scenes, both of nature and art; or an artist more capable of giving a correct and pleasing impression of the scenes which he has made it his occupation to portray.

A Fox's Tale, a Sketch of the Hunting-field. Day and Son (Limited) London.

This is a most worthy pendant, by the same author, to "The Autobiography of a Salmon," of which we expressed such unqualified approval in our last. "The Fox's Tale" is an unaffected narrative "by one of themselves," of the joys and sorrows of the Vulpine race, interspersed with sketches of the characters and characteristics of a hunt and hunting-field, but with no tinge of the fast or trace of slang to mar its agreeable flavour. It would seem impossible to have compressed into less than one hundred pages more or prettier cabinet studies of landscape and figure than we have found here. The life of a vixen and her cubs in haystack and gorse, the gentleman farmer, the master of hounds, the huntsman and his *aides*, the field, and the meet, are all sketched with singular brevity and precision, and "the Run," with its every incident, is so felicitous that we defy any lover of the country and the sport to lay it down unfinished. Poor Renard, indeed, tells his story so well as to enlist our sympathy, and the reader is excellently well pleased with the dramatic artifice—albeit a true story—by which the editor avoids so unpleasant a catastrophe as the fall of the curtain over a scene of blood.

Manuel Pratique et Raisonné de l'Amateur de Tableaux. By Dr. Lachaise. Paris. 18mo.

A very useful work by a well-known art critic. The manual, which contains a large amount of information in a small compass, includes an excellent chapter on the history of art; valuable hints on the distinctive characteristics of all the schools and of the principal masters; on the means of judging whether a picture is really an original, an imitation, or a copy, and whether it remains intact or has been submitted to the tender or other mercies of the restorers; on the perils of public and private sales, and the laws and regulations relating thereto; and on the preservation of pictures, and the precautions necessary to be observed in their restoration.

Dr. Lachaise naturally devotes a considerable part of this work to the French school, and a short extract from his observations under that head will give an idea of his views relative to the painters of the nineteenth century:—

"In the eighteenth century French art went through three marked phases. The first was that of gallantry or courtly politeness, personified in Watteau, and which was endowed by a veritably official character by the creation, in the Academy of the Fine Arts itself, of a section of painting entitled *Fêtes galantes*. The second, quite as distinctly defined as the first, was the reign of pure sensuality, and had for its leader François Boucher. The third, still marked in the corner, as it were, with the same stamp, that of love, accommodated itself to the feeling of the time, and exhibited, in the works of Fragonard, a tendency towards sentiment. Greuze and Prud'hon, without forming a school, took up the moral and the poetic side, and remain the masters of the transition. In truth, the poetic transformation through which France was then passing, and which culminated in 1789, occupied all minds and demanded of art something more than the frivolities with which the preceding century was satisfied.

"From the epoch we have named, painting seemed to have no other mission but that of inspiring the masses with feelings of abnegation and disinterestedness, with the sentiment of liberty and devotion to their country. The Oath of the Horatii, Belisarius asking alms, and the Death of the Sons of Brutus, placed David at the head of those who could comprehend the powerful aid which painting could give to new ideas, and made him the chief of a school which had great *éclat*, but which did not sufficiently understand its own origin to see that, in matters of art as in politics, to

destroy is not to create, or to escape a despotic spirit which rendered it hostile to whatever was produced beyond its own breast. This school, in fact, had scarcely received the public sanction, and proved that art was in a bad road when it felt itself called upon to regenerate art, treated with disdain all its predecessors, and carried fatuity so far as not only to give insulting nicknames to many artists then held in esteem, but to carry one of its own adepts, Drouais, in triumph to the Pantheon, forgetting that the Tarpeian Rock is not far from the Capitol.

"Thus the public mind no sooner recovered from the astonishment created by this school, than it began to doubt if art consisted in nothing more than the good drawing of a figure; if the models of the atelier, covered with Greek and Roman tunics, and wearing sandals borrowed from the opera, really presented a fair representation of the antique; if stiff, outstretched arms could really assume any other position—in fact there were not wanting opponents with the boldness to proclaim that the respect professed by David and his school for the antique was simply a mannerism under which they hid the barrenness of their imagination and the uncertainty of their object.

"The doubt once admitted, was soon changed to certainty, and the law of retaliation was so rigorously applied to the school in question, that the very expressions it had used against its predecessors were now turned against itself. Does the school of David merit the neglect, nay the disdain, with which it is treated at the present day? No! a thousand times, No! In the first place there was reason for its existence, in order to rid the domain of art of frivolity, prettiness, and conventionality, and it did its work in a satisfactory manner; only, it persisted in the means when they were no longer necessary. Further, if in attempting to reduce art to absolute theories, it deprived it of those charms which it derives from imagination, it also presented its wanderings, and showed that without certain principles art would be but an allusion or pure fantasy. The school may, moreover, quote, in opposition to its detractors, names before which all men of sense must bow, and historical pages worthy of the imperishable glories which they are destined to celebrate. If all the works produced by the pencils of these chiefs leave something to be desired, it is equally incontestable that in the greater part of them many of the most essential conditions of art are exhibited in a high degree. . . . Let us then render justice to this school; let us admit that it too often sacrificed spirit for theory; that in order to reach the mind of the masses it contented itself with drawing correctly, even to hardness; that it did not sufficiently occupy itself either with the seductions of colour or the effects of chiaroscuro; that it therefore often remained formal and cold; but let us admit that it possessed great skill in composition, a well-expressed intention and a constant effort to raise itself to the level of the brilliant period which it had to traverse, great care with respect to details, and a practical skill which enabled it to triumph over the difficulties presented by given official subjects and the strange costumes of the period."

Every one will not of course agree, as we do generally, with the above appreciation of the school of David, but all must see that Dr. Lachaise has studied his subject with care and, we may add, success.

A chapter at the end of the volume will be highly acceptable to connoisseurs; it contains a list of the most important works of art in all languages, to be consulted, not only on the subject of painting in general, but on that of each school taken separately.

OLLA PODRIDA.

The Pictures for the Academy are beginning to assume shape, and some of them are already being much talked about. Most notable is Mr. Frith's, which will be one of the great, if not the greatest picture of the season; the subject is "Evelyn visiting Whitehall on a Sunday, a few days before the death of Charles the Second," and shocked at the dissolute exhibition of manners by which the king is surrounded. Mr. Elmore will exhibit the first-fruits of his visit to the East last winter. It will be a telling subject, and will be familiar to all Scripture readers. Although 'tis old as the East itself, and still daily to be seen, it is strange that none of our many artists, who now travel so far for subjects, have ever treated it. John Phillip is recovered from his severe illness, and has three pictures on hand for the Academy. O'Neil has two fine subjects, one an incident in the life of Luther, and the other an incident connected with Titian. Leighton has four contributions getting ready; and Prinsep will have a Venetian interior. John Burgess is preparing a successor to his "Bravo Toro" of last year, by which his established repute will not suffer.

In the Water-Colour Exhibition, Mr. Louis Haghe will have a very fine picture, an interior of a monastery at Rome.

New Music.—We have received the following songs and pieces from Messrs. Boosey & Co.: "The Express Quadrille," by Charles Coote; "La Vie Parisienne Valse, sur l'Opéra d'Offenbach," par C. H. R. Marriott; "La Vie Parisienne Quadrille," by the same arranger; "Marie Valse," par S. Hugh Baillie (Colonel Royal Horse Guards); "Ralouka, Marche Turque," composée par Blumenthal; "Fantasie sur la Prière et Chasse du Freischütz," par Réné Favarger; "Riding thro' the Broom," "Strangers yet," and "Only a Lock of Hair," by Claribel; "She is not Fair to outward View," and "Thou art lost to me," by Arthur Sullivan; "Come Home, Father" (Christy Minstrel ballad); "Douglas, Douglas, tender and true," by Bernard Althaus; "The Bells of Aberdovey," words and accompaniment by George Linley; and "Gathered Treasures," words by Tom Hood, music by Elizabeth Philp.

The dance music of M. Marriott is within the means of comparative beginners at the pianoforte. There are no quadrilles now of the Henri Herz and Dos Santos type, and pianists need not anticipate finding their capabilities very severely tried in quadrilles, valses, &c. Mr. C. Coote's descriptive quadrille is, in plain terms, easy to play, and good to dance to. Some years ago M. Réné Favarger's fantasia on "Oberon" at once established his credit as an arranger of the "brilliant, but not difficult" order. This new specimen of his talent now before us is a very favourable instance of what may be done to secure a brilliant effect without putting serious difficulties in the way. M. Blumenthal's quaint and original march may be recommended to all classes of pianists, and is by no means difficult. Amongst the younger English musicians Mr. Arthur Sullivan holds a very high position. Latterly he has become more widely known as a song-writer, and we can pay him no higher compliment than to predict that many of his compositions will live in the future when other commonplace productions are entirely forgotten. "Thou are lost to me" might be sung by a contralto or baritone. Its companion is in A flat, and ranges to the G above the line.

"Strangers yet" is in E flat, and in all probability will rival in popularity some of Claribel's most famous songs. It is signed by Madame Sainton-Dolby, and is a remarkable instance of the steady increase in the market price of these things. Four shillings is demanded for Lord Houghton's tender and graceful words, and the fair Claribel's setting thereof. "Only a Lock of Hair" is expressive and flowing in the melody, and is adapted for a tenor voice. The song is in B flat, and ranges upward to A, first line above.

Messrs. Robert Cocks & Co. have issued the under-

mentioned publications:—"Rosabella Valse," by Adam Wright; "Bon Soir Galop," by Fred. Godfrey; "Blossoms of Thought," by Robert William Pearse; "The Wishing Cap," a song by W. T. Wrighton; and "Sing me that song again," a serenade by Guglielmo. "Blossoms of Thought" are original preludes for the pianoforte, and some of them indicate the composer to be gifted with real musical feelings. There is a certain originality about the greater number of these studies. In Band-master Godfrey's galop, a very short song is introduced, the melody being founded on the "Coldstream Guard's Valse." The galop, of its class, is good. Mr. Wrighton can write expressive and plaintive ballads; but he is not so happy in treating the "Wishing Cap" description of subject. The words are by Charles Mackay.

The Japanese Jugglers.—Novelty, though sometimes very startling, is not always genuine; but in the case of the Japanese troupe, now flying paper butterflies and spinning tops at St. Martin's Hall, it is eminently so. The party of middle-aged men, young women, and children, from the country of the Tycoon, twelve in all, began enlightening the Saxons, at a private performance, on February 9th. Asi-Kitchi-San is the artist and the gentleman of the party, and his butterfly trick must be seen to be believed. The Japanese manner is easy, and almost carelessly self-possessed, though undisfigured by any show of vulgar confidence. Native dignity, and a calm consciousness of excellence in some branches of their art, the males of the company certainly seem to possess. Gaensee, "top-spinner to the Tycoon," and Asi-Kitchi-San are especially intelligent-looking. "Beauty is but skin deep," and hardly that, with the actresses of Japan; but then in England we can ensure the finest complexions in the world; for if the white and pink of nature are not forthcoming, the artistic substitutes are to be procured in Bond Street. The Japanese ladies are sallow, and, in comparison with their masculine companions, sleepy-looking. To this rule there is one exception, namely, a young girl with an almost European complexion. After twelve simultaneous salaams from the entire and richly-dressed party, this fair-skinned maiden puts on a head-dress something like an exaggerated mitre, and dances after the rather ungainly fashion of her native land. There is nothing of the languid, dreamy, and poetical "Almée" spirit in this performance; but, on the contrary, a decided angularity of movement. The peculiarity of the dresses is their extraordinary richness and roominess; and the neatest figure in Japan is apparently doomed to be encased in habiliments which would fit a Celestial Chang.

The Japanese bring their own music, and lamentations will not be general when they take it back again, for it is very irritating to the susceptible European nerves. Tone seems no particular object; time but imperfectly understood; and tune not at all. The very thin strings of a distressing kind of banjo are sometimes twanged by the ladies' fingers, and sometimes worried by a wooden implement, neither a miniature cricket-bat nor a spoon, but something of both. There is also a small toneless drum, and a drum major, who divides his time between this excruciating instrument and an invention in the shape of a vivandière's spirit-keg. He taps both with two sticks, but extracts nothing like sweet sounds from either. A running fire of the songs of Japan accompanies the various performances, and one of these vague effusions is given with most amusing seriousness by the youngest of the three children. Gaensee's top-spinning is a wonderful exhibition of its kind. He throws the tops in the air and catches them, still spinning, on a cane; "sends them to sleep," as Young England says, now on the edge of a sword, and now on the top of a fan, and, in point of fact, does precisely what he pleases with them.

Both conjurers and acrobats are, as was anticipated, clever. Two of the latter, who are attached to this troupe, climb and clamber about a light bamboo scaffolding in St. Martin's Hall, after the manner of the late chimpanzee at the Crystal Palace; and one of them, owing to the accidental breaking of a cane from which he was hanging, was for a few moments in great danger. Bamboos, however, are tough and fibrous, and the courage and presence of mind, fortunately belonging to the Japanese as well as to the English fraternity, saved the performer from death, and the spectators from a sad shock.

Asi-Kitchi-San's "butterfly trick" is the crowning glory of this remarkable entertainment. He tears a small piece of rice-paper into the shape of a little white butterfly, and with the current of air from a fan keeps it moving in the exact imitation of the insect. He talks to it in evidently persuasive and facetious language, and at length it quietly settles on the top of another fan carried in the left hand. The artist,—for a thing of this kind is artistic in the highest degree,—manages two with equal success; and anything more delicate, pretty, and really marvellous as an imitation of nature, it is impossible to conceive.

Herr Ernst Schulz, a physiognomist and a very remarkable man, gave a lecture, or private performance, on the 29th of last November, to an invited few at the Egyptian Hall. He has since been lost to sight, but under the suggestive title, "Masks and Faces," his entertainment is now heralded to the London public. We have a few broad, abstract, ideas of physiognomy, and know that raised eyebrows express surprise, that when lowered they help to indicate anger, and that a curled lip implies scorn and contempt. It is, however, reserved for a philosophical mind, and extraordinarily mobile features, such as Ernst Schulz possesses, to demonstrate how truthfully human nature and temperament may be illustrated by one man. Grimace is despised, and caricature quietly put on one side by this student of humanity, who creates effects which could hardly be credited, and never descends to violence or vulgarity. Ernst Schulz presses down his hair, turns his collar down, and settles his marvellously plastic features into a representation of semi-imbecility absolutely startling from its simple truth and fidelity. He does not show us a maundering idiot, which picture to a certain extent must always be repulsive, but he brings us face to face with a simpering fool we all immediately recognize as a common object in every-day-life. The lecturer's facial illustration of the "phlegmatic" temperament, the purse-proud man, and the "pious person" are living photographs of the highest artistic excellence. Herr Schulz, in the second part of his lecture, treated of the "Lights and Shadows of Character betrayed in the Beard," and here made use of some peculiarly cunning arrangement by which he threw a shadow on his face of the exact shape and size required for the "military moustache," the "millionaire's whiskers," or the "diabolical beard." The portrait album was rather a mistake, inasmuch as the bodies of the subjects were badly drawn and painted. Herr Schulz, of course, put his head through the canvass, and perhaps he treated the "working man" somewhat unkindly. By the assistance of dresses and the mysteriously arranged light, he finished with a series of typical portraits. A Tyrolese, an American Indian, and a specimen of Bosjesman female beauty, were included in this section of a highly intellectual entertainment. He sits at a table, and manages the complexion, whiskers, and beard-imitating apparatus with unerring certainty and without assistance. It may be some artful combination of mirrors and reflectors that enables him to throw the light, flesh-tint, beard, and moustache on his face at the same instant. Whatever may be his means at command, the result is extraordinary, and Herr Ernst Schulz's entertainment is a thing to be seen.

NATURE AND ART

April 1, 1867.

THE FOUNDATIONS OF THE EARTH.

By J. Carpenter, F.R.A.S., of the Royal Observatory, Greenwich.

THE Mosaic record of the Creation tells of the period when "the earth was without form and void." Without this authoritative testimony, the evidence of our senses alone would lead us to the conviction that the materials of which the world is composed must have existed, at some time, in a form different from that in which we now find them. In the smaller phenomena of nature we are for ever witnessing a constant succession of changes taking place—a perpetual mutation in form and nature occurring in the same material substances. All is transitory, nothing is finite. Everything that *is* has already existed in some other form before, and will exist in yet another form again. The operations of natural laws vary quantitatively, but not qualitatively; and if the law of transformation governs the lesser works of the Creator it governs the greater also: the earth, like every object that exists upon it, must have had an origin from some simpler and more elementary form of matter. Guided by the light of modern science, let us endeavour to discover what that origin was.

Our earth is but a small and insignificant member of a vast planetary system, all the components of which must have had a common or a contemporaneous origin: to inquire into the origin of the earth we must embrace in our inquiry the formation of the whole solar system. The first physicist who attempted a solution of this question was the celebrated French naturalist, Buffon: although several romantic theories for the formation of the earth alone had been put forth by the fantastic cosmogonists, Burnet, Whiston, and Woodward. These, however, scarcely need mention here: as much as is worth knowing concerning them is to be found in popular shape in Goldsmith's "History of the Earth and Animated Nature." Buffon's hypothesis supposed that the sun existed at some period of remote antiquity without any attendant planets, and that a comet, dashing obliquely upon it, ploughed up and drove off a portion of the solar matter sufficient in bulk to form the various planets of the system: that the earth and planets at the time of their quitting the sun were in a liquid, burning state, and that by degrees they cooled; while in their liquid state assuming their spherical form. But this hypothesis is in many respects untenable; principally, because it assumes the sun to be already existent, whereas any explanation of the origin of the solar system must include that of the principal member; secondly, because it is insufficient to explain the mechanical conditions of the system. The theory, however, deserves notice, as having induced inquiry into one more probable.

Kepler, and others among the early astronomers, imagined that the sun and stars—the suns of distant worlds—had been formed by the condensation of celestial vapours: Kepler basing his supposition upon the phenomena of the sudden bursting forth of new stars upon the margin of the milky way—the only celestial appearance then known which seemed to be of vapoury nature. But when the telescope fathomed the depths of celestial space and revealed to our knowledge the existence of those mysterious patches of hazy luminosity that received the name of *nebulæ*, strong evidence was afforded of the possible validity of the old astronomer's supposition. It may be necessary to inform those who are uninitiated in the details of celestial nature that these nebulæ are faint patches of diffused light which abound in great numbers all over the heavens; assuming an infinite variety of form, and looking like little wisps or spots of thin cloud, or fog, in the field of the telescope. The earliest telescopes served to discover but a very few of them: it was only when the immense and powerful instruments of the elder Herschel swept every nook and corner, as it were, of the heavens with their stupendous eyes, that their exceeding abundance came to be recognised. This giant among observers found no less than 2,500 of such nebulæ, and yet he overlooked the thousands that have been detected by various subsequent astronomers.

During the earlier course of his nebular researches, Sir William Herschel appears to have inclined to the opinion that all nebulæ were in reality remote clusters of stars, so remote and so

thickly clustered as to affect the eye only by their united lustre—just as a handful of sand thrown on the floor would look only like a dusky patch to an eye so distant that it could not perceive the individual grains. Some of them were clearly resolvable into their component stars with high telescopic power, and it was thought that a *sufficient* increase of optical power would resolve the whole of them. But as his familiarity with their features increased, he was led to an opinion analogous to that of some of the older astronomers: that was, that they were immense heaps of some vapoury or elementary matter out of which stars were, in the course of countless ages, formed by a process of condensation, such as the attraction of one particle by another would produce. With this theory in his mind he was led to classify the various descriptions of nebulæ that had passed in review before him, according to a plan or scheme of progressive development: sorting together into one grade all those of a certain extent of diffusion, and those of a more condensed nature into another. His first class included the extensively diffused and shapeless nebulosities that are faintly discernible and traceable over large areas of celestial space; his second embraced those that exhibited a stage a little more approaching a regular form; and so on through about thirty classes, the latter of which included those in which the condensation had proceeded so far as to give them the appearance of planets or nebulous stars. Between the descriptions of the members of one class and those of another, there was not a greater difference than—to quote his own words—"there would be in an annual description of the human figure were it given from the birth of a child till he comes to be a man in his prime." He further adds:—"the total dissimilitude between the appearance of a diffusion of the nebulous matter and of a star, is so striking, that an idea of the conversion of the one into the other can hardly occur to any one who has not before him the result of the critical examination of the nebulous system which has been displayed in this (his) paper. The end I have had in view, by arranging my observations in the order in which they have been placed, has been to show, that the above-mentioned extremes may be connected by such nearly allied intermediate steps as will make it highly probable that every succeeding state of the nebulous matter is the result of the action of gravitation upon it, while in a foregoing one, and by such steps the successive condensation of it has been brought up to the planetary condition."

The observations of Herschel paved the way for the speculations of the illustrious Laplace. Herschel, from the evidence afforded by his observations, explained how, by the mere action of gravitation, a chaotic mass of primordial matter was probably transformed into a body of definite form and dimensions, though still of a somewhat diffused and nebulous nature: Laplace demonstrated how the known laws of gravitation could, from such a planetary mass of diffused matter, produce a system of bodies revolving about a great central one, such as we have an example of in our solar system. This theory has ever since been known as Laplace's *nebular hypothesis*. When its illustrious author put forth his conjectures he did so, to use his own words, "with the deference that ought to inspire everything that is not a result of observation and calculation;" at the same time he expressed his conviction that the striking coincidences of all the planetary phenomena with the conditions of his hypothesis, gave his conjectures a probability strongly approaching certitude.

It is not easy to give an intelligible description of such an intricate subject as the nebular hypothesis within the limited confines of a popular article; nor is it necessary: those who wish to pursue it in all its details will hardly resort to a periodical like ours for their information, as they know, or would soon learn, where to find the original work in which it was put forth. All that is necessary, is to give the reader such few of the leading features of the theory as will suffice to explain its principle.

Laplace supposed, then, that the whole solar system was once a huge nebula, with a slight condensation in the centre, like many which we now find scattered about the heavens; and that it was endued with a rotary motion around its centre. (It must be borne in mind that a nebula as extensive as the limits of the solar system would be a very small one compared to many hundreds of those that are known.) He supposed that in the process of condensation, combined with the effect of the rotary motion, this nebula threw off or abandoned certain of its outlying portions from time to time: first throwing off a zone or ring of matter which was to form the remotest planet of our system—Neptune: then condensing a little more and casting off a second, within the former, which was to form the next planet—Uranus: then a third to form Saturn; a fourth to form Jupiter; a fifth to form Mars; a sixth to form the earth, and so on. These various concentric rings or zones of matter, he supposes, themselves broke up and condensed and formed little nebulæ, revolving about the central one which was left when all the above were cast off, and which of course constituted the sun itself; and these little nebulæ, throwing off, in their turn, successive lesser rings, which were to form the satellites of each, the whole of the detached portions, the earth among the rest, in the course of time—immeasurable time—condensed into globular form, that form which all bodies left free to take their own shape, naturally assume. One exception only to a globe occurs in the solar system, and that is the ring of Saturn, which Laplace considers to be an exception that proves the rule, inasmuch as it gives a strong confirmation of the probability of the original ringed condition of the various members of the system. The reason why this annulus is not found in other cases is that the mechanical conditions requisite for the permanent maintenance of a ring form would be very seldom fulfilled. Lest any one should be inclined to doubt the possibility of the solid earth and all

its kindred planets ever having been a mass of vapour, we may state that if all the matter composing the whole solar system were so spread out and diffused as to be equally distributed over an area as large as the orbit of the planet Neptune, the expanded matter would be so light and thin as to exceed in rarity atmospheric air; its condition in such a state has been compared to the infinitesimal density of what is called a vacuum in the receiver of an air-pump. A ton weight of matter that would fill the space of a cubic mile must be as thin as a gas; but if that ton of matter could be condensed into the space of a cubic foot, it would be a material denser than iron.

When we consider the fact that the nebular hypothesis of Laplace satisfies nearly, if not actually, all the conditions that we observe in the solar system; when, too, we regard the character of its exponent, his stupendous mathematical achievements, and the improbability of his proposing a mere fantastic scheme without satisfying himself of its validity on all points, we shall have no difficulty in appreciating the assertion of the illustrious Arago, that the ideas of Laplace upon the constitution of the solar system "are those only that by their grandeur, their coherence, and their mathematical character can be truly considered as forming a physical cosmogony."*

But sceptics had a good reason for disbelieving this theory. It depended solely upon the existence of this nebulous matter, of which the only evidence was the visibility of patches of nebulous light scattered about the heavens; and many of those were undoubtedly proved, upon scrutiny by powerful telescopes, to be nothing but remote clusters of thickly aggregated stars, so remote and so closely clustered that they were visible to the dimmer vision of less powerful instruments only by their *united* lustre. Why should not all the so-called nebulæ be clusters, which future and yet more powerful instruments would resolve into their component stars? The question was one fraught with interest to speculative astronomers. One of the brightest nebulæ in the skies, that in the sword-handle of Orion, although its brightness indicated a proximity that would have allowed its component stars to be seen with comparative facility, nevertheless baffled all attempts to resolve it, until at length the stupendous telescope of the Earl of Rosse was completed and turned upon it. Then, as was thought, it succumbed, for the Earl of Rosse declared, upon the authority of his observations, the greater part of the nebulæ to abound with stars, and to exhibit the characteristics of resolvability strongly marked. With the supposed resolution of this nebula the last stronghold of the nebular hypothesis was thought to have been overthrown.

Thus the matter stood twenty years ago, and thus it might have remained till now, had not one of astronomy's sister sciences stepped in within the past few years, we might even say months, to lend her aid to the solution of the mystery. This science is optics, and that branch of it to which we are about to allude is the newly-found means of discovering the chemical constitution of celestial bodies by analysis of the light they emit. Every one knows that when a beam of light passes through a prism of glass and falls upon a wall, it is formed into a beautiful luminous band tinged with all the colours of the rainbow; this luminous band being known as the prismatic spectrum. But it may not be known that this spectrum is not the same for every sort of light; that a different one is produced, according as the light emanates from one luminous source or another. For instance, a solid body in combustion will give one species of spectrum, while a flame of a particular gas will give one of a totally different class, and the light emitted from a metallic substance in a state of fusion another. So that if an astronomer applies a prism to the eyepiece of his telescope while observing any celestial body, he can tell something of what the chemical constitution of the body may be. The sun has been found to be a solid body, in a state of incandescence, surrounded by the intensely heated vapours of a variety of chemical substances. The fixed stars have been found to resemble the sun generally, but with slight variations attributable to a difference of some of the elements composing them. Now, if the nebulæ were clusters of stars, it would be found that their light would yield spectra analogous to those of the stars; but, on the contrary, many of them yield spectra which leave no doubt whatever that they are composed of immense masses of some gaseous or vapoury matter. The observations of this class are exceedingly difficult and delicate, and the subject is as yet comparatively in its infancy; but all that has been done, as yet, goes to support the nebular hypothesis, by at least proving that *all* the nebulæ are not remote clusters of stars.

But, thanks to the scientific achievements of the past quarter of a century, we have yet another link between the facts that we observe, and the theory by which we would explain them. That the foundations of our earth were laid under the action of a fervent heat, is a fact of which the igneous rocks that form those foundations yield abundant testimony: and whence was such a heat derived? This question carries us on to another, for we are led to inquire, what is heat? A few years ago we should have been told that it was a subtle fluid pervading the inter-atomic spaces of matter: now we learn that it is only one of the many phenomena of motion. The "mechanical theory of heat,"—"the great philosophical doctrine of the present era of science," as it has been justly termed, teaches us that heat is nothing more than a species of motion amongst the atoms or molecules of bodies. Arrest the motion of a cannon ball by placing a target in its path; and what is the consequence? The ball is raised to a fiery heat by the concussion. We rub our hands briskly

* It is a noteworthy fact that the French *Bureau des Longitudes* has significantly expressed its opinion concerning Laplace's views by republishing his original notes, in the last volume of its *Annuaire*—that for the present year.

together, and they become warm. A blacksmith beats a bar of iron with his hammer, and it becomes red hot. Why is this? We appeal to the "mechanical theory," and we are told in reply that—whenever motion (*i. e.* force) is arrested, the motion of the mass becomes transferred to the atoms or molecules composing it, and this molecular motion is heat.

And now to apply this to our subject. In the collision, or condensation, or aggregation of the particles of matter that the nebular hypothesis affirms to have produced the various bodies of our system, an immense amount of motive power must have been arrested; and inasmuch as this great store of force could not be lost or turned to nothing, it appeared as heat, and an intensity of heat was generated sufficient to reduce the whole mass to a state of fusion. To quote the words of one of the most famous exponents of this new philosophy—Dr. J. R. Mayer—"Newton's theory of gravitation, whilst it enables us to determine, from its present form, the earth's state of aggregation in ages past, at the same time points out to us a source of heat powerful enough to produce such a state of aggregation, powerful enough to melt worlds; it teaches us to consider the molten state of a planet as the result of the mechanical union of cosmical masses, and thus to derive the radiation of the sun and the heat in the bowels of the earth from a common origin." And, as an example of the amount of heat this collision of cosmical masses would produce, Dr. Mayer cites that, supposing the earth to have been formed by the union of the two masses only, coming together from a great distance by the influence of their mutual attraction, the generated heat would have been sufficient, if the masses had been of nearly equal size, to raise the temperature of the whole body to from 30,000 to 40,000 degrees of the centigrade scale—twenty times the temperature of the melting point of iron; and the greater the number of parts thus brought into mechanical combination, the greater the quantity of heat that would be developed.

"The form of the earth is its history;" and this form indicates with mathematical certainty that it was once a more or less fluid body; the flattening at the poles being precisely of that extent which a liquid mass rotating at the speed of the earth would be subject to; and the igneous phenomena of the earth's crust, and the store of heat yet embowelled in its interior, are ample evidence that its former fluid condition was that of a molten mass rather than that of an aqueous solution.

But, assuming this to have been the origin of the primary condition of the earth, there must have been a time when the igneous body began to part with its heat, by radiation into surrounding space; and it is in this cooling process that we are to look for a cause for the diversity of geological features that the surface of our planet presents to view.

We may reasonably suppose, and the heated state of the earth's interior supports the supposition, that the first portion of the globe to cool was the exterior. The cooling and solidification of this portion would result in the production of a solid shell enclosing a molten nucleus, somewhat as we now find to be the case. Now between this solid shell and molten interior there would be a constant succession of conflicting actions: the shell, contracting as it cooled, would squeeze up, as it were, the interior: the interior, in its turn solidifying, would expand—for all substances expand in passing from the molten to the solid state—and thrust outward the confining shell; then, contracting as it further cooled, it would shrink away from the shell which, now unsupported, would fall in upon the retreating nucleus. By actions like these, the smooth surface which the planet might otherwise have retained would be broken up and distorted; mountain ranges would be formed by the ejection of the molten interior through the broken shell; continents be produced by the alternate thrustings-out and fallings-in which the shell would be subject to; and all those irregularities be occasioned which manifest themselves in the igneous foundations of the globe.

Fire on the one hand, and water on the other, are the two elements to which all the geological features of the earth are referable. With the second of these elements we have no concern in this sketch, for it is tolerably well known that its action produced those deposits which constitute the secondary and tertiary formations of the geologist, and which we may regard as superstructures reared upon a foundation that had a fiery origin. Incredible as it may appear to those who look at the present condition of the world they inhabit, there can be little doubt that that world was once a fiery globe, glowing possibly with a fervour comparable with that of the sun as we now behold it, though of far less significant size. How many centuries—how many hundred centuries—have elapsed since this was the case? We have an approximation to the period, but it may be enormously in error. Sir William Thompson, from a calculation of the rate of cooling of earthly bodies, assigns for the cooling of the crust of the earth, from a state of fusion to its present temperature, a period of 98 millions of years. And if this incomprehensible interval has elapsed since the earth took its finite form, how great, how stupendous, must be the lapse of time that has intervened since the matter of which it is composed, wandered through space a chaotic mass "without form and void!"

ON SKETCHING FROM NATURE.

By Aaron Penley, Professor of Landscape Painting at the Royal Military Academy, Woolwich.

No. IX. A SPUR OF BEN LOMOND.

THIS is the first sunset drawing introduced into the pages of Nature and Art. The effect is that of a summer's evening when the sun has just sunk below the horizon, leaving the heavens illumined in softened, but still golden, light. At this particular time such an amount of warm reflection is diffused over the landscape as finds its way to the feelings of most people—at any rate, of all who are nature-loving, and who delight in the study and practice of transmitting her effects to paper. We all like warmth of colour—it is natural to do so; there is something cheering and exciting in it; and for this reason, apart even from that mingling of harmonizing and contrasting hues, a sunset effect is always looked upon with pleasure.

To give a simple, yet an agreeable illustration, I have avoided any complicated arrangement of clouds, whereby the pupil would be confused, and have sought to produce a breadth of effect and singleness of character which will tend to show the blending of tones peculiar to the *sunset*. I have also selected for study a description of scenery calculated to convey instruction and manipulative dexterity—the latter being requisite, truly requisite, for the expression of intention. And this being the case, I cannot advocate too much a neat and careful method of handling the brush, or a careful study, before applying it, of what has to be done, and of the manner in which it is to be done. A little halting, with some thought upon "the why and the wherefore," will greatly help to success, whereas the want of it will always be accompanied by failure. An esteemed friend of mine, who really is an excellent amateur artist, once told me that immediately he began to put on the first wash of the sky, it was "a case of *sal volatile*, he felt so nervous." That this is a general feeling I can pretty well testify, having witnessed it so constantly in my numerous pupils; therefore I the more earnestly recommend the exercise of thought, first upon the *matter* and then upon the *manner* of treating it. In addition to all this, cleanliness is most desirable, and should be observed in respect to the Colour-box, Brushes, and Paper. The first should (at least in my opinion) always be sponged clean, and wiped with a pallette cloth after finishing the day's painting. It will then be ready for further use, and the most delicate tints may be produced without danger of unnecessary mixture. The brushes should also be washed and put into form by passing them through the pallette cloth. As for the paper, too great care cannot be taken in keeping its surface free from dirt or abrasion of any kind; and, to preserve the equality of texture, bread will be found preferable to india-rubber in making corrections. With these prefatory remarks, I begin to place before the amateur directions for copying the present subject upon Loch Lomond. It is only in the first stages of progression, and yet sufficiently coloured to give a somewhat true and pleasing impression.

I have said much—but not too much—upon the necessity of having a correct and well-drawn outline before thinking of commencing to colour. I will now only say, let it not be neglected. After the paper has been washed with clean water and a large brush, prepare some rose madder (or crimson lake) and yellow ochre in two different tints—the one inclining to a roseate hue and the other to a light amber; and, while the drawing is still damp, commence at the top with the red tint and join the yellow midway, then add the red just above the mountains, and also over them as far as the water, where again change for the yellow, passing over the middle distance and foreground to the right, and then again taking more red over the immediate front. While in its wet condition, take a piece of blotting-paper, folded once or twice, and touch with its sharp edge upon the white light on the stones by the water's edge, which will remove the colour very softly, and regain the white of the paper. This method of obtaining light is frequently put into practice when fleecy clouds or a mackarel sky are to be represented. When this first blotting in (or washing in) of colour is dry—quite dry—the drawing should be turned upside down, and the yellow portion of the sky passed over with clean water, and then a tint of cobalt, with a little rose madder (or lake) introduced into it, and carried to the top of the sky. This will give the grey warmth of tone seen above. After this, make some tints of the amber, roseate, and blue hues, and apply them over the mountains, observing where the several changes occur. Take care not to let the blue mingle with the orange tone, which would completely spoil the purity of colour, but let it rather amalgamate with the roseate tint, where it will unite agreeably into the soft clear greys, away from the influence of sunlight. Attention to these contrasting as well as harmonizing varieties must be observed, as by them the effect of lustrous light, if I may so speak, is preserved. The water will also receive light washes from these colours. The warm yellow tones of the middle distance, as well as the grass, are to be put in with yellow ochre and a little rose madder. The grey shadows (warm in character) must also have their first washes placed correctly, and somewhat strongly, with the edges decided and clear.

At this stage, when the whole of the above flat tints are satisfactorily done, it is desirable to wash all over them with a soft brush and clean water, to

remove the colouring matter from the upper surface of the paper. If properly washed, scarcely any of the colour will come off: nor should it, the object being simply to produce a more perfect blending, and to adapt the paper better to receive every subsequent wash. I find the safer plan to do this successfully is to place the drawing a short time before the fire, so that the colour may become hardened, and have some hold upon the paper, and then the washing may generally be depended upon. Different papers, however, have much to do in this respect, as well as the granulation of surface. A very fine texture, much sized, does not absorb the colour so well as a more open grain with less size: therefore *too* smooth a surface should be avoided. On the other hand, too rough a grain will not admit of the brush giving that clear and decided handling so much to be desired—at all events, by the tyro—in water-colour painting.

The washing having been accomplished, other tones have to be passed over the mountains (and sky if too light), with precisely the same colours, giving to each part the tint of which it partakes. The trees in the middle distance are of a variety of tones, produced from COBALT, YELLOW OCHRE, and CRIMSON LAKE (not rose madder). For the middle distance and grass in the foreground use GAMBOGE, RAW SIENNA, and SEPIA. The stones are also continued in their darker touches and shadows with COBALT, YELLOW OCHRE, and LAKE, which colours are also to be employed for the stems of the trees. In the foliage of the nearer trees there is much diversity, and it is requisite to observe the exact character of the green tints, giving them precisely according to the copy, as their position is of much value to the effect of the whole drawing. GAMBOGE, BURNT SIENNA, and INDIGO, with the addition of LAKE for one of them, are to be the colours for these several gradations or varieties of hues. The brush should be tolerably well filled for putting in these washes. The road is to have a slight wash of COBALT and ROSE MADDER over the front part, in order to send the light upon it to that part by the trees.

Beyond the foregoing instructions I say nothing, thinking it as well that, in the more immediate details, the pupil had better exercise the knowledge already attained. In a future number I purpose giving the same drawing in its finished state, when I shall speak of its composition at some length.

THE DRAMA. AUDIENCES AND PERFORMANCES.

SOME of the reflective people who go to the theatres more to oblige others than themselves, are beginning to make philosophical inquiries as to the kind of entertainments they find there. The majority are not so inquisitive, and take the goods the managers provide for them without much inquiry or criticism. Of course when a London man goes to a theatre and pays, he goes because he has some liking for the class of entertainment announced; and therefore, if he does exercise any judgment upon it, it is not upon the species, but the individual specimen of it which he witnesses. Having selected a theatre which announces a burlesque or a pantomime, he confines his comparisons to the performance he sees. There are, however, large numbers of persons—and they consist generally of those from the country—who, having to "do" the theatres in a few days, go haphazard into them, taking the performances as they may chance to turn up. It is this class of playgoers, though they have little critical capacity and no experience, that is most dissatisfied with the theatres; and if they happen to be of the educated order, such as country magistrates, local professional people, or clergymen, it is from them that the deepest cry issues of the decline of the British drama. In their youth, when they were more capable of enjoying and less inclined to criticise, they recollect seeing some peerless actor, some extraordinary genius; and to this standard they rack every performer, expecting from a walking gentleman the intensity of an Edmund Kean, or the grandeur of a Kemble. They have also read, as a part of the literature of the country, the dramatic collections; and thus unprepared for the modern drama, it seems to them a mass of either vicious intrigue, outrageous exaggeration, or incomprehensible nonsense. It may be said, if this is the impression produced on our country cousins, how is it that they throng the theatres and contribute so very largely to their support? There are two replies to this assertion. First, provincial persons are very chary of giving absolute judgments; and, secondly, there are such influxes every hour of them into London that it is the succession of visitors, and not the repetition of visits, that constitutes our great London audiences. There are also many metropolitans who are in the same condition as the country visitors, as living in the suburbs, and only occasionally going to the theatre; though they are somewhat more influenced by the actual performance, and proportionally drawn by the particular entertainment announced. Still, both classes of these kinds of visitors are in the main actuated rather by the idea of "going to the play," than by any other motive.

Although, then, country and suburban visitors form a very large proportion of theatre supporters, yet there are still a large class of persons who are regular habitués and frequenters of them. The million who dwell within a two-mile radius of St. Paul's still furnish a large proportion of theatre

frequenters, and these, each in his degree, are critics, and discriminate after their fashion very precisely on the performances. They lead and, indeed, generally make the demonstrations on the part of the audience. But even of these many are only occasional visitors, and therefore are perfectly passive. The young butcher and Matilda Mary Anne at the play have other thoughts in their heads than the precise amount of intelligence Mr. Phelps displays, or than even the exact amount of vivacity shown by the Harlequin and Columbine. Still, the majority of London play-goers have a standard of excellence, and expect a fulfilment of it, and if the English drama has any patrons who at all affect its performances, it is this class, which is, however, subdivided into many departments. The chief divisions are the youths of the lower class, who frequent the galleries, and the young men of the upper class, who frequent the stalls and the pits, according to the capacities of their pockets. The boxes are more frequented by families; and mater-familias is anything but critical on fine-art matters, so that her children are pleased. As it is only by analyzing audiences that we can come to the rationale of stage performances, we have indulged in this dissertation. There is of course a great action and reaction in the matter of public amusements. The manager is anxious to attract, and the audiences expect to be pleased. In fulfilling these efforts, many mistakes are made, and theatrical management becomes a very tentative occupation. Certainly many pieces have achieved extraordinary runs that no one anticipated. It was a mere experiment that brought Mr. Sothern before a London audience; and we well recollect that, in the theatre he was to appear at, great doubts were expressed as to his success. That he would be endured was doubtful, yet the town, including those presiding young men of the pits and galleries, so took to him that he performed the same character every night for a year. When the "Colleen Bawn" came out, there was nothing in it to show it would become the most popular piece of the time; and even now it is difficult to say why it was so. Taste, however, in matters of amusement, "*vires acquirit eundo:*" and this *vis* is commonly called fashion. What many admire, all wish to see.

Theatrical people, whom many suppose to be the most reckless of mortals, are, on the contrary, the most cautious and careful in professional matters. A successful modern manager is the most pains-taking of men; actors the most punctual. Neither military nor commercial men are more exact in their business matters. Nothing will induce a manager to voluntarily run the risk of the failure of a piece; nor will any actor of repute take a part he thinks likely to be damned. Neither of them has any very strong perceptive powers as to the capacity of an untried drama; nor of an entirely original part. They are almost wholly guided by facts. A successful French melodrame will be played at every theatre in London, and become a model for all dramas until some other piece of a totally different kind unexpectedly arises, when there is another flooding of the managerial mind. The "Ticket-of-Leave Man" succeeds; and there is no end of burglarious plays. "Lady Audley's Secret" is dramatized, and all the authoress's novels are put on the stage. An old comedy which has a literary but no theatrical repute, revived in mere despair, attracts, and all the most celebrated of a like kind are produced. In the theatre, all is tentative that is original; but the staple of the stage is a manufacturing to pattern.

To manufacture is the genius of this age; and he who does not manufacture may become famous, but he never will become rich. The premium of millions is given to successful manufacture; but no man without multiplying talent can be a millionnaire by his own efforts. The tenor singer may earn large sums, but the spinner of popular melodies will make infinitely more. The dramatists are beginning to learn this; and therefore their entire aim is to be popular. They no longer conduct themselves as literary men, but avow they are manufacturers. Mr. Boucicault is the least literary and the most successful of stage-play manufacturers; and he not only knows how to manufacture, but he has a complete commercial knowledge in the vending of his wares. He gets every penny out of them. It must be owned, his scientific knowledge of the construction of dramatic wares is very exact and ingenious. He has carefully studied what tells on the stage; he is very diligent in collecting interesting material; he is most unscrupulous as regards taste in using it. It is not that he writes dramas that exemplify human nature, or reflect human events, or even human probabilities; but that he knows how to excite the mind of his audience, and put them in a state that the grossest impossibilities will be received for facts. He is at present the first of stage manufacturers. Many others emulate him; but they have not his finish. "Arrah na Pogue" was finished so completely that it seemed to have something of the creation of literature in it; but it had not. Mr. Tom Taylor has more of literary power; and he has not yet quite come to studying nothing but stage effect. His characters say, as well as do, something. Yet in this author the artisan manipulation is becoming far more apparent than the art work. His last production at the Haymarket, "A Lesson for Life," is extremely mechanical, although the first two acts are manipulated with great skill. The last act is absolutely coarse work: probably the chief actor has set his clumsy hand to it to make the relief higher; but, in so doing, he has become fulsome and exaggerated. The manufacturing system is strongly shown at the Lyceum Theatre; although it is rather in the accessories than the drama that the handicraft is exercised. Here the stage business is faultless. The scenery in "Rouge et Noir" is all of the best kind of manufacture. Ditto the costumes. Ditto the upholstery. Ditto the realities of all kinds. Ditto the acting. Consequently it is impossible to find fault; but it is equally impossible to be interested. Like the domesticated game sold in the markets, it is fresh, it is plump, it

looks all that pheasants and partridges should; but it is flavourless. Truly the feasts of the Barmecides are not confined to taverns! everywhere we have all the outward show of literature, drama, art; but we test them—and lo! they are a mockery.

And why is it that riches can command everything but excellence? Truly because excellence is scarce; and the thorough appreciation of it almost equally so. The nightingale sings in the bush; and if nightingales were to become the rage, they would be manufactured by thousands; but the incessant little warbler in the artificial bush in the conservatory or at the theatre, would be a very different thing to the lonely songster at the edge of a moor warbling to solitude and a distant listener. Yes! everybody wants to make money, in order, as he thinks, that he may have everything else. But the multitude can only be supplied by manufacture; and nature is still so kind that she gives her setting suns, her nightingales, and her balmiest airs to the poor ploughman, who "homeward plods his weary way." It comes all then to this: the millions can only be supplied by manufacture; and noble art, —which is but another name for the highest excellence,—is only the produce of some one rare mind; esteemed by the few of a congenital nature; and only gradually and gently disseminated to the many. Whether the many can ever be so enlarged and so elevated as to at once see and approve the highest, cannot be discussed here. All that is sought in these desultory utterances is to show that the present state of the stage grows out of circumstances—perhaps out of uncontrollable circumstances; that it is no better and no worse off than other branches of art and literature; and that the drama of the present day is as much a manufacture as clocks and watches are. There is, however, this vast difference, that the stage is more at variance with the mind of the age than the watch machinist is, because in matters which bear the semblance of art, the soul seeks for delight, and is not satisfied with utility.

INGRES.

FULL of years and honours the greatest of the French painters has gone down to his grave. He survived his favourite and most devoted pupil scarcely three years; for Hippolyte Flandrin died, it will be remembered, in the spring of 1864. The distinction which Ingres had attained and the success he had achieved are well known to those who are interested, however little, in the Art of France. But the struggles of this painter's youth—struggles prolonged, indeed, into middle age—the fierce controversies as to his claim to honour and fame: these are not so widely known. With the mention of his name there rises in our minds the image of the great artist, incontestably successful; the artist whom a king of the house of Orleans, and an emperor of the house of Bonaparte agreed to distinguish; who was made a grand officer of the Legion of Honour and a senator of France. But the name of Ingres is not less truly associated with the toils of years, and with wearisome struggles for recognition, made almost alone and in the face of the most powerful opposition. Ingres found no royal road to fame and fortune: he beat out his own track painfully and laboriously, and in the midst of profound discouragements. He was born at Montauban, on the 15th September, 1781; and he showed a taste or a talent for painting when he was a very young child: but his father had designed that he should devote himself to music. The fathers of men of genius generally have some cherished plan for their sons, which they at last reluctantly abandon: and so it was with the father of Ingres. Fearful lest his own wish should never be realized, he actually forbade his son to draw or to paint. But at Toulouse, where the boy was receiving his education, he got this prohibition withdrawn; and, later still, the parent consented that young Ingres should be a painter. The youth went to Paris, and placed himself under David, who was then at the height of his fame. He was nineteen years old when he obtained the second prize from the Académie des Beaux Arts; and not long afterwards he took the first prize, through the merits of his *Embassy to the Tent of Achilles*. Such early successes may seem to belie the statement that his upward course was a course of struggle; but it should be remembered that in those early days the school of David was in the ascendant; and the trying days for that school were still to come. When the tide began to turn, and a different class of painters became popular in France, it was urged that M. Ingres—the obscure young man from the country—had been too profusely rewarded; and if the decisions of the last few years could have been reversed, reversed they would have been. In 1808 he painted a portrait of Napoleon, which was purchased for the Hôtel des Invalides; and when that work was finished he left Paris for Rome. It was his intention to remain in Rome four or five years; but that period was greatly exceeded, on account of the coldness with which the works he sent to France were received in his native country. At Rome, in 1813, he married; but his worst days were still to come. From that time forward, for some years, he was dependent for his daily bread upon the sale of pencil sketches. Nevertheless, this period saw the beginning and completion of some of his best pictures. They are known chiefly in Italy; or, at

all events, they were at the time of their production, though the knowledge of them has now reached the country of his birth. In 1820 M. Ingres moved to Florence, where he painted the *Entry of Charles V. into Paris*, and the *Vow of Louis XIII.*, both of which are in the cathedral of Montauban. The *Apotheosis of Homer*, which is generally regarded as his master-piece, was painted when the artist was back again in Paris, in the year 1827. Perhaps it represents, as well as any single picture can, the range and power of his genius—his ideal composition, his correct drawing, his sober colouring. Yet the claims of this picture to praise were, at the time, fiercely contested; though now the great classic artist had his own band of supporters, who made a good fight on his behalf.

In Paris Ingres established a school, to which those young students who had the best judgment and taste, or the wisest advisers, quickly resorted. Hippolyte Flandrin joined this school on his arrival from Lyons; and he was never slow to avow his obligations to its master. As a man the pupil loved M. Ingres: as an artist he almost adored him. And if we desire a more impartial testimony to the beneficial influence of Ingres than the favourite pupil and attached friend himself could give, we find it in the words used by the Vicomte Delaborde to describe that influence:—"C'est un honneur pour le peintre de *l'Apothéose d'Homère* d'avoir formé le peintre de *Saint-Vincent de Paul*, et cet honneur est d'autant plus grand que les exemples fournis au disciple ont, en instruisant celui-ci, moins dénaturé son propre sentiment, moins compromis l'indépendance de sa pensée. M. Ingres a pu transmettre, et il a en effet révélé, à Flandrin les secrets de l'ampleur et de la finesse dans l'exécution, d'une correction sévère dans les formes."

In 1834, and not five years before that date, as has been incorrectly stated, Ingres was appointed director of the French Academy at Rome, on the resignation of M. Horace Vernet. Some of his friends thought it a pity for him to leave France just as his name (so they thought) was becoming more famous and his teaching more honoured. But Ingres accepted the situation; and, if the truth were known, he was probably glad to escape the endless and wearisome discussions to which his pictures gave rise, and which so long as he remained in Paris he could not altogether avoid. Truth was on his side. It was great, and he knew it would prevail. So he could afford to wait the issue, and give himself to work. It was from Rome, we believe, that M. Ingres sent his great picture of *Stratonice*—the famous picture bought first by the Duke of Orleans, then acquired by M. Demidoff, and afterwards in possession of the Duc d'Aumale. About 1842, the painter returned to France, and from that time till 1855, he was busily engaged in painting. At the Universal Exhibition held in Paris in the last-mentioned year, he was fortunate enough to have a room assigned entirely to his own works; and a noble display they made of all that is most graceful and pure in allegorical or in simply religious painting.

Since 1855 M. Ingres has painted less than in the days of his middle life; yet his brush has not been idle. The *Source*, a girl's figure entirely "undressed," attracted the notice of everybody and the admiration of artists, at the International Exhibition held in London in 1862. It was said to be a portrait, very much "idealized," of the daughter of his *concierge*.

In these latter days no voice has been lifted up to contest the great painter's supremacy; and, though many artists in his own country stray from the broad clear lines he has laid down for them to follow, there are few who would not admit the excellence of his teaching and of his own practice. King Louis Philippe named him a knight of the Legion of Honour, and subsequently a commander. A sovereign yet more apt to distinguish genius and to reward it, promoted him to the rank of Grand Officer in 1855. In 1862 that monarch named him a senator of France: he could bestow no higher compliment upon the veteran painter. Happy in his domestic relations, at peace with the world, and soothed with the thought that full recognition had after many days been made of his genius and laborious efforts, Jean-Auguste-Dominique Ingres died, in his eighty-sixth year, on the 14th of January, leaving the classicists, who had so long clustered round him, in grief and in embarrassment where to find a new leader.

A FEW NOTES, HISTORICAL AND HERALDIC, ON THE LION.

THE probably wide-spread existence of the Lion, in the early ages of man's history, is a point which appears to us to have been somewhat overlooked by the numerous writers who have undertaken to describe the so-called "Monarch of the Forest." The intimate acquaintance with the peculiarities of these animals, which we observe in the works of ancient artists, and of writers sacred and profane, though it may not wholly determine, at least appears strongly to favour the supposition of such existence. The subject is an interesting one, both to the student of history and to the naturalist, as affording presumptive evidence of a former prevalence of the species which must have exerted an important influence on the extension alike of the human family and of other races of the animal kingdom,* in regions where all

* M. Jules Gérard estimated the destruction of cattle by each lion in Algeria at £300 per annum.

Another French writer (M. Chaissaing) calculates it at

traces of its presence (in the shape of organic remains or otherwise) have been lost.

Let us turn in the first instance to the writers of the Old Testament of every period, from the days of the patriarch Job to those of the Babylonish Captivity, twelve centuries later. Biblical commentators enumerate five different terms thus applied by those writers; viz., *gur*, a Lion whelp; *chephir*, a young Lion just leaving his parents; *ari*, a young Lion just paired; *sachel*, an old Lion; *laish*, a fierce (or more literally a black) Lion.*

Thus we have in Ezekiel, chap. xix.: "She brought up 'one of her whelps' (*gur*), and it became 'a young lion' (*chephir*), and learned to devour men."

And in Numbers xxiii.: "The people shall rise up like a great lion, and lift himself up as 'a young lion' (*ari*); he shall not lie down till he eat of the prey, and drink the blood of the slain."

And in 2 Sam. xvii. 10: "Whose heart is valiant as the heart of a lion" (*ari*).

Again in Job iv. 10: "The roaring of the lion (*sachel*), the voice of the 'fierce lion' (*laish*), and the teeth of the 'young lions'" (*arim*).

And in Proverbs xxvi.: "A slothful man saith there is a lion (*sachel*) in the way, a lion (*sachel*) is in the streets;" and in chap. xxx.: "A lion (*laish*), which is the strongest among beasts."

Many more passages might be quoted, but the above are, we think, sufficient to show, not only an intimate acquaintance with the peculiarities of the Lion on the part of the sacred writers, but also that the similes they used (the points of which are partly lost in the translations) were assumed to have the force of familiar incidents to those to whom their writings were addressed.

The Assyrian antiquities are an example of the same familiarity with the Lion, among ancient artists. If due allowance be made for the material in which these bas-reliefs were executed, and for the fact of the figures being invariably in profile, and in outline only, the spirit and fidelity with which the lions are rendered will, we think, be allowed by every close observer to be remarkable, and to contrast strikingly to the disadvantage of many "Studies from the Life" of artists of later date.*

It must be remembered that in those days Chaldæa was not the wilderness it has since become, but teemed with a busy population, possessing a degree of civilization and refinement, such as recent discoveries have at length enabled us in some measure to recognize and understand.

In ancient profane writers, the same fact is observable. Let us take the frequent allusions to the Lion which are to be met with in the Iliad; without going to extremes, like the learned commentators of whom Swift wrote,—

"Who view
In Homer more than Homer knew,"—

we must allow, with a recent critic, "that there is not a single passage among the many in the Iliad relating to the Lion, which contains anything that is not true to nature," and "that whenever and wherever the bard lived, lions must certainly have been tolerably plentiful."

The writings of Aristotle are another example in point; wherever he may have acquired his information (and this we presume will ever remain an open question), his description of the Lion is, save in a few details, correct; and as such, differs widely from the absurdities he has recorded of other equally common animals, as the camel and the elephant. It is frequently assumed that many of his details were drawn from the pages of Homer and Hesiod, and the resemblance is certainly often very close; we may cite his account of the Lion's slow and deliberate retreat when attacked, turning himself about at intervals, to glare on his pursuers, the simile used by Homer to describe the retreat of Ajax from the Trojan host:—

"Θηρὶ ἐοικὼς
Ἐντροπαλιζόμενος ὀλίγον γόνυ γουνὸς ἀμείβων."
Il. xi. 486.

Aristotle (quoting, however, most probably, from Herodotus) asserts the existence of lions in Europe in his day.

As a further example of intimacy with the minuter details of the subject, we would instance the small claw on the Lion's tail, the existence of which was denied by modern naturalists, until the fact was vouched for by Blumenbach; but which appears in the Assyrian remains, and is alluded to by Homer.† The writings of Aristotle no doubt

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1 sheep every day; 1 ox every month; 1 horse every two months, besides many camels, and a considerable number of human lives for each adult lion during his career. He quotes the probable destruction, under the first *three heads alone*, in two departments of Algeria, at £27,000 per annum. Neither will these accounts appear exaggerated, if we bear in mind the immense loss of human life and the frightful slaughter of cattle, in certain districts of *India*, by wild animals (chiefly tigers and wolves), in despite of the large sums paid annually as rewards for their destruction.

* Lions' whelps (*gurim*) when small are, as the writer can vouch, playful and affectionate, though very destructive pets.

When between one and two years old, they begin to kill on their own account (*chephir*), and according to M. Jules Gérard, at two years are able to strangle a horse or camel. He adds, the destruction they then cause is frightful; they appear to kill in order "*to learn to kill.*"

The Lion attains maturity at eight years, and when he first pairs appears peculiarly daring (*ari*). When he gets old and unable to pull down game, he frequents the neighbourhood of villages and becomes a man-eater (*sachel*). Both in North and South Africa, black lions, *i.e.* those with dark tips to the hairs of the mane, are reputed the most fierce. Recent naturalists incline to the belief that size, colour, &c. depend on locality and the nature of the cover the animal frequents, rather than on difference of species.

* The spirit of the originals is, generally speaking, altogether lost in the fac-similes of the bas-reliefs which are given in popular works on these antiquities.

† The following remarks on this point, in Mr. F. Buckland's entertaining volumes of "Curiosities of Natural History," Third Series, may not here be out of place.

"In the Proceedings of the Zoological Society, September 11th, 1832, we find it recorded that a specimen was exhibited of a claw, obtained from the tip of the tail of a young lion from Barbary. It was first seen on the living animal by Mr. G. Bennett, who pointed it out to the keeper. They secured the beast, and while handling the claw it

formed the groundwork of Pliny's well-known account of the animal; most of the additional information given by the latter writer consisting of the absurdest fables. In the case of the Lion these marvels have always appeared to us somewhat remarkable, when we keep in view the habits of personal observation for which the Roman naturalist was proverbially noted, and the number of these animals which it would seem were then brought to Rome. Thus he relates having himself witnessed the triumphal entry of Marc Antony, in a car drawn by lions;* and a few years later, 800 of these animals are said to have been brought from the province of Numidia to the Roman arenas in the course of a few months. The works of Pliny and other writers of his day, in their turn, doubtless furnished the marvel-loving minds of our forefathers with abundance of pabulum. Not only do we find traces of their stories in the writings of Bossewell, Gwillim, and other old heralds, but the illustrations of many mediæval MSS., and the carvings in some of our older cathedrals, abound with conceits of evident classical origin.

The Lion, however, plays so important a part in our national heraldry, that we must be permitted to devote a few words to this point.

The Lion appears to have been a favourite allegorical device, in the earliest times. A golden Lion was the emblem of the tribe of Judah, a silver Lion was the badge of the Macedonian conqueror. Lions (not tigers) were, we are told, the insignia of many early Indian dynasties,* and the "ruddy Lion rampant," of Scotland—though we may not be prepared, like certain Scotch antiquaries, to refer it to the days of the mythical king Fergus, centuries before the Christian era—can unquestionably lay claim to great antiquity. It is remarkable that, with the exception of the Eagle, the Lion is the only living creature figured in the early Rolls of Arms. Lions have so been borne by the sovereigns of England, from the time when first they possessed armorial insignia. A Lion was the ensign of the native princes of Wales;† of the kings of Norway, of Denmark, of Leon, of Bohemia, of Hungary; of the counts of Holland, of Hainault, of Eu, &c. &c. It occurs, in like manner, in the arms of the most powerful English barons.

The Lion was at first represented by heralds as rampant, *i.e.* in the attitude of combat *only*, and as such was typical of all the nobler attributes,—courage, fortitude, magnanimity, &c. The colours were varied heraldically, possibly as much for the sake of increasing the armorial significance as for the purposes of distinction.

Lions in a walking position were termed heraldically *Leopards*, a practice which continued as late as the fifteenth century, and which has given rise to many mistakes in the descriptions of the Royal Arms of England. Two Leopards or Lions leopard, gold on a red ground, were thus the Royal Arms until the reign of the first Richard, when a third Lion was added thereto, and the shield became what it has since remained.

In addition to the Lions in the Royal Arms, these animals were frequently assumed as royal badges or devices, and adopted in the arms of royal retainers. Thus the sable Lion of Hainault was a badge of Edward III., being the arms of his queen, Philippa of Hainault, and as such, it appears in the coat armour of many old English families. A sable Lion, "the black Lion of Powys," was also the arms of Madoc ap Meredyth, and the device of his descendant Owen Glendower; hence its frequent occurrence in Welsh armoury. The gules Lion in the arms of Scotch families, usually points to some intermarriage with Scotch royalty; but in English coat armour it would seem to have originated in the fact of its having been a favourite badge of the Lancastrians (the Lion of Leon, the arms of Constance, daughter of Pedro the Cruel, and wife of Henry, duke of Lancaster); and thus it was probably often adopted by families on the

came right off, and was brought under the notice of the Society. It is formed of corncous matter, like an ordinary nail, being solid throughout the greater part of its length; towards the apex it is sharp, at the other end it is hollow and a little expanded; it is flattened throughout its entire length, which does not quite amount to *three-eighths of an inch*. Its colour is that of horn, but it becomes dark even to blackness at the tip. Its presence or absence does not depend on size, as the Lion in Paris, on which it was found, was of considerable size, while that belonging to the Society, from which this was taken, was small and young; nor upon sex, for, although it was wanting in the female in London, it existed in the Lioness in Paris." Mr. Buckland adds, "it is evident from their smallness, their variable form, their complete envelopment in the fur, and especially from the readiness with which they are detached, that these can fulfil no very important design, let it be what it may." He expresses his own belief that the claw is no more than a bit of the ordinary scarf skin of the tail, which, confined to its place by the dense hairs which form the tuft at the end of the tail, is prevented from falling out of its place, and in time becomes hard and horn-like.—*Curiosities of Natural History*, Third Series, vol. i. p. 220.

* Lions are occasionally depicted in the Egyptian remains. One instance, which is specially noticed by Sir G. Wilkinson, represents figures hunting with tame lions in place of hounds. This, if we accept the examples on these remains as sober representations of fact, and not as having been occasionally vagaries of the artist's fancies, was but an instance of that skill in domesticating animals by which cats were taught to retrieve wild fowl in the fens, and apes to assist in the labours of the husbandman. It is curious, however, to note that this familiarity with the Lion does not seem to have led to the depreciation of his powers and attributes observable in the writings of some recent travellers. The Lion was, on the contrary, a favourite symbol of power and majesty among the ancient Egyptians. Many examples of this being the case occur in the hieroglyphical inscriptions which have been brought to light of late years. We may instance one at Beitou-Ally, in honour of Rameses II., given by Rosellini, and quoted by Mr. Birch, in his "Introduction to the Study of the Egyptian Hieroglyphs:"

> "O perfect god, very terrible,
> The *strong Lion*; mighty lord;
> Strangler of hostile lands.
> Fallen are the Tahennu [European] to thy blade,
> Killed lies Phut [Asia] under thy sandals," &c., &c.

* Pocock's "India in Greece."

† The names of the Lion in Welsh, in Gaelic, and in the Scandinavian dialects, appear to us to indicate that the cognomen, and probably the idea of the animal, was derived from a Latin source.

Lancastrian side.* The silver Lion of Suffolk, borne by the Howards, of which Scott speaks,—

> "Who in field or foray slack
> Saw the *blanch* Lion e'er fall back"—

was, in like manner, a favourite device of Edward III., and descended to the Howards through the Mowbrays. Neither was this symbolical use of the Lion confined to the Western nations. We have an example of the contrary in the modern inhabitants of the Punjâb. The Sikhs were so named from the Hindostanee verb *sikna*, to teach, and they claimed to be men of peace, from being TAUGHT; but the cruelties of the Mahomedans in the North of India caused them to become men of war, and they called themselves LIONS, which in their language is SINGH. Every Sikh now calls himself by this name. Dhuleep Singh is the LION Dhuleep, and his father, Runjeet Singh, was, in like manner, the LION Runjeet.

No more appropriate pictorial illustration of this paper could have suggested itself than a chromotype after one of Mr. Vernon Heath's now famous photographs. Our artist has very happily availed himself of the facilities kindly placed at our disposal, and done injustice neither to the subject nor the eminent modeller. With this brief allusion to the speciality of our magazine, we must now bring our notes on these, "the chiefest of all terrestrial animals" (as the old Herald Gwillim terms them), to a close.

* This badge (a Lion rampant, gules) was adopted by the Duke of Lancaster in token of his supposed claim to the crown of Leon. A glance at Sir Bernard Burke's "Encyclopedia of Heraldry" will show how frequently the charge occurs in English armoury.

THE COCOA-NUT PALM.

(*Cocos nucifera.*)

By W. B. LORD, Royal Artillery.

AMONGST the pleasant memories and "green spots" scattered here and there along the path of the traveller to distant lands, few will perhaps have made a more lasting and pleasing impression than his first visit to a grove of cocoa-nut trees; and the cool refreshing rustle of the long graceful fronds as they ripple and wave feather-like before the fresh trade wind, is a sound so unlike most others, that, once heard, it is rarely forgotten, but comes back in far-off scenes like some old familiar tune or the voice of a dear friend.

The coral reef, reared from the ocean's depths by the labours of myriads of tiny coral insects, year by year and age by age, growing ever upwards, at last reaches the surface, and the crisp-green waves break in snow-white foam on the mighty barrier which the legion of pigmies have built up to dispute their dominion. Sea-weed, drift-wood, the dead echini, the broken empty shell, the stranded fish, and the thousand and one waifs and strays ever drifting with the tidal currents, accumulate on the new-formed rock: all these in time decay or break up, but are ever added to, until at last, wave-borne in its tough and buoyant husk, a cocoa-nut arrives, germinates, and sends its roots far out amongst the congenial elements with which it is surrounded, and, watered by the tropic shower and the surf-spray, shoots boldly up, towers aloft, becomes a tree, and in due time bears fruit, which, when matured, falls, and again germinates like the parent. The passing sea-fowl and migratory birds, tempted by the havens of rest thus afforded, alight to recruit their weary pinions, bring seeds of trees and plants from far-off islands and continents, undigested in their crops; these, too, spring into life, bear seed, flourish in their new home for the brief period of their existence, and by death and decay help to furnish the materials for the sustenance of succeeding generations of plants.

At length man appears on the scene and claims the little kingdom Nature has prepared and made ready to his hand. Thus it is that the innumerable coral islands dotting the tropic seas are formed, and these are the favourite homes of the cocoa-nut tree. There are other situations in which it grows and where its cultivation is carefully attended to; but the cocoa-palm loves the sea breeze as heartily as an ancient mariner, and thrives best within its influence, rarely arriving at perfection at a greater height than six hundred feet above the sea level. Numbers of coral isles, formed as we have described, are perfectly destitute of water, and contain neither wells nor springs. These islands, beautiful as they are, would be perfectly uninhabitable had not a bountiful Providence provided a substitute in the deliciously cool fluid yielded by the young cocoa-nuts, of which any quantity can be obtained by climbing. Each nut, when of the proper stage of growth, contains about a pint of liquid, cool as water from the depths of a cavern, and possessing a combination of acidity and sweetness most piquant and highly refreshing. Sheltered from the noon-tide sun by the fern-like canopy overhead, and with a cluster of freshly-gathered nuts before him, the traveller will scarcely fail to remember Thomson's lines:—

> "Shelter'd amid the orchards of the sun,
> Where high palmetos lift their graceful shade;
> Give me to drain the cocoa's milky bowl,
> And from the palm to drain its fresh'ning wine:
> More bountcous far than all the frantic juice,
> Which Bacchus pours——."

The range of this invaluable tree is very extensive, it is found in Africa, the East and West Indies, South America, and the countless islands of the Southern seas. There are many varieties of cocoa-nuts, each distinguished by some well-marked peculiarity: in Tahiti (one of the Society group) there are six kinds, each known amongst the natives by some distinct name; in Ceylon four well-marked varieties exist. The Buddhist priests generally contrive to have a number of the choicest kinds in the neighbourhood of their temples, as they not only, like the monks of old, keep a bright eye on the good things of earth, but secure a stock of the best nuts as propitiatory and alms-producing offerings to the passing wayfarer. The *Tembili*, which is a very well-formed handsome nut, of oval form and bright rich orange tint, is usually selected for this purpose; there are also sub-varieties of this nut. The *Nawasi* is slightly heart-shaped, of lighter colour than the preceding, and bears an edible husk: when the outer skin is stripped off, the rind within turns to a pale red colour, and is fit for use. There is another kind which bears a somewhat small and round nut; but in colour much like the Tembili. The fourth description is the common cocoa-nut, too well known to need description. In the cabinets of the curious there are frequently preserved specimens of what has been called the *Double*, or *sea cocoa-nut* (*Ladoicea Seychellarum*), and in old days the most marvellous medicinal virtues were attributed to it, and nuts of this kind were considered unfailing antidotes to all kinds of poison: their origin was veiled in obscurity, as those obtained were either picked up floating at sea or on the coasts of the Maldive Islands, where they were washed by the tides and currents. At one time the most extravagant sums were asked and obtained for them. A merchant-ship, with her freight and stores complete, has been given in exchange for one. £400 have been refused, and it is recorded that the Emperor Rodolph the Second caused an offer of 4,000 florins to be made for one which chanced to be for sale; but that sum being considered insufficient, the precious nut passed into other hands.

The natives believed that the trees producing these nuts grew at the bottom of the sea, and were enchanted palms, which vanished the instant the adventurous diver attempted to reach them; others believed that huge griffins resided in these magic groves, visiting the land at night for the purpose of supping on elephants and tigers, and spending their time during the day in luring ships within their reach, when they at once made a meal of the mariners navigating them. Instant death was the portion of any secretive native who failed in at once handing over to the king such nuts as he might find on the coast. These, when sold by royal authority, proved by no means an insignificant revenue. The kernel of the nut was the part in which the miraculous medicinal virtues were supposed to reside; and the most ridiculous and anomalous ingredients were mixed with it for use, such as the antlers of deer pounded, ebony raspings, red coral dust, and several other matters equally useless. These once coveted treasures are now by no means as rare as they used to be, being easy of obtainment in the Seychelle Islands, the place of their growth. Attempts have been made to introduce this description of nut into the Isle of France, and there appears no reason why they should not thrive there. The palm bearing it is said to require 130 years to bring it to maturity; this we are somewhat sceptical about. Cups made from the shells are in high repute amongst the more wealthy natives of India, by whom large sums are expended in gold and precious stones for mounting and ornamenting them. The religious mendicants of Ceylon set a high value on these shells, and use them as alms-boxes, believing that there is some attractive influence possessed by the nut-shell which irresistibly draws the contributions into them. If this were really so how great would become the demand for *sea cocoa-nuts*, even in this enlightened island! In favourable situations the palm bearing the common cocoa-nut grows to from sixty to eighty feet in height, but rarely exceeds from one to two feet in diameter at the base.

An upright cocoa-nut tree is nearly as great a rarity as a black rose or blue dahlia; almost every angle of inclination may be seen among the trees forming a grove, the prevailing winds often influencing their line of direction. The roughness of the bark covering the trunk throughout its length is caused by the progressive falling off of the fronds or leaves as the tree shoots upwards, the tufted crown alone retaining the living foliage. Here the graceful fern-like leaves may be seen in every stage of growth and development, the lower tiers drooping, those above spreading out feather-like, whilst the centre stands up plume-like in all its beauty. The nuts grow in clusters, and from forty or fifty to two and even three hundred in different stages of development, may at times by careful examination be counted on one tree. Many members of the palm family produce incredible numbers of blossoms on the spathes, which are thrown up amongst the leaflets of the crown. The sago palm of the Orinoco has been said to have produced eight thousand fruits, whilst one spathe of the date palm has been computed to contain over twelve thousand male flowers. The spathe of the cocoa palm is often nearly four feet long, and six inches in circumference. The annexed cut, on a diminished scale, will serve to show the form of the blossoms, and the manner in which they are encased. In favourable seasons these plumes of flowers are shot forth every four or five weeks, and as the blossoms pass away the young nuts are formed progressively, affording a store from which a hungry or thirsty man may provide and refresh himself all the year round. When the sap of the palm is sought for the manufacture of *toddy* and some other products, the soft young fronds, together with the flower spathe, are bound together with ligatures in order to prevent the development of the blossoms. A puncture is then made at the foot of the spathe with an instrument called a toddy-knife, and numerous taps administered to the neighbour-

hood of the cut with its handle to set the sap flowing. An earthen chatty-pot is then suspended in a suitable position for the cool sweet juices of the tree to

slowly drain. At early morn, before the sun pours down his consuming rays, the toddy-drawer with monkey-like agility again ascends the tree, lowers down his well-filled pot at the end of a string (*vide* cut), and replaces it with an empty one. From two to six pints, according to the state of the weather and other conditional circumstances, are generally collected as the result of one night's running, but the trees thus treated yield no fruit. The *toddy* or *tarce* thus obtained was the *palm-wine* of the poets. Immediately after collection it is extremely sweet and cool; in the course of very few hours a change takes place, and a peculiarly agreeable acidity takes the place of its former luscious condition. In this state it is deliciously refreshing, but in four-and-twenty hours it becomes quite sour. To make *arrack* or *rack* as it is sometimes called, so celebrated in the old days of deep potations, Vauxhall Gardens, and "*crown bowls of punch*," the toddy is fermented and distilled. An inferior spirit is often made from both rice and sugar, being merely flavoured with

cocoa-nut juice, but the imposture is easily detected by the experienced. Vinegar is made by allowing the toddy to stand in earthen jars fitted with

covers for about a month: the liquid, after being carefully strained, is replaced in the jars, and a little red pepper, a small piece of the fruit of the gamboge tree, and a pod or seed-vessel of the horse-radish, which in the East is a tree (*Hypertanthera moringa*), are added to each vessel of fluid. In about five weeks vinegar of most excellent quality is the result. From the sap, before fermentation, when boiled to a syrup with quick-lime, and roughly crystallized, the material known as *Jaggery*, or native sugar, is made. Great quantities of this are both exported and consumed where it is made for the manufacture of the commoner kinds of confectionery. So much for the sap of the tree.

The fruit is consumed in an almost endless variety of ways, and not one single portion of it, or of the palm it grows on, is without a use. The young, green, undeveloped nut, as we have before stated, contains a rich store of cool and delicious drink which, when habitually partaken of by the fair sex, is said by the elderly dowagers of the East to render the complexion permanently clear, remove all wrinkles, and, in fact, like a Madame Rachael of the vegetable world, *make beautiful for ever*. However painful it may be to our feelings to cast doubt on this very agreeable little belief, experience in countries where cocoa-nuts in every stage of growth are easy of obtainment, compels us to state that beauty even in these favoured lands is not invariable; that complexions are not always clear; and that wrinkles are no rarity. Perhaps some heedless fair ones neglect to avail themselves of the potent virtues of the nut *Quien sabe* (*who knows*)? We tread on dangerous ground: so will proceed.

This same liquid, when duly prepared, makes an indelible black dye; the young nuts which contain it also hold within their soft rich crusts, veritable vegetable *Blanc Mange*, so delicious that one is tempted to habitually carry about a spoon in some convenient pocket, wherewith to extract the delicacy. A number of very excellent dishes are made from it. When a short time has passed a species of pulp of firmer consistence is formed, constituting quite a different kind of food, and allowing for the scope of more ingenuity on the part of the cooks; in the South Seas it is often worked up with the Taro root (*Arum esculentum*) into balls as large as thirty-two-pound shot, and baked in the earth ovens of the natives. The kernel of the nut when ripe, and in some respects resembling the condition in which it is usually eaten in this country, is treated in a variety of ways for the preparation of food, and the manufacture of oil, in which it abounds. A perfumed oil in high repute amongst the native beaux and belles of some of the Islands, together with a substantial and durable article of diet, is thus made. The kernels of a large number of nuts are scraped and rasped fine, and pressed through the close fibres of a sort of bag formed by the natural cloth enveloping the embryo nut clusters and young fronds. A sort of soft paste being thus obtained, certain highly perfumed grasses, roots, and chips are procured and well stirred in; the vessel containing the mixture is then placed in the sun, the heat of which soon causes a flow of oil. This on rising to the surface is carefully skimmed off with shells from the beach, and preserved for use. When no more oil is to be obtained, the remaining mass is thoroughly pounded, folded in green banana leaves, made into secure packages, and laid amongst the deep rock pools in the sea, where they are securely retained by placing heavy lumps of coral rock upon them. This prepared paste or "*Kora*," as it is called, retains its goodness for a very long time, and is a food extensively consumed, and to which the Islanders are very partial.

There is another native inhabiting these cocoa-nut isles, who, although no cook, consumes his share, or perhaps rather more, of the tree treasures. This worthy is the "*Ou Ou*," or great robber crab (*Birgus latro*), who, miner-like, excavates deep galleries in the coral sand beneath the roots of the palms or other trees in the vicinity of the cocoa-nut groves, sallying forth in true brigand-like manner to feast on the fruit. Strange tales have been told of these marauders climbing the tall stems of the cocoa trees, for the purpose of detaching and casting down the nuts. We are not prepared to say that certain varieties may not have been known to do so; our own experience, however, leads us to believe that such nuts as fall to the ground constitute the ordinary spoils appropriated by *B. latro*. These his enormously powerful and heavy nippers enable him to husk, and rend from their tough coverings with surprising facility; and it is only necessary to examine a cocoa-nut husk with the nut enclosed, as they are brought to this country, to be convinced that our nut-eating friend must be a sort of crustacean Hercules to be able to drag it forth. And so he is, for the tenacious, wire-like network of cocoa-nut fibre in which the prize is enveloped is split and rent asunder as though with large iron pincers, and the brown nut set free. The end on which the three well-known holes, or *monkey's face*, are situated is then attacked, and a succession of heavy raps rapidly delivered with the large claw. A breach is thus soon made into which the narrow nippers are inserted, and the sweet, white, oleaginous kernel deftly scooped out.

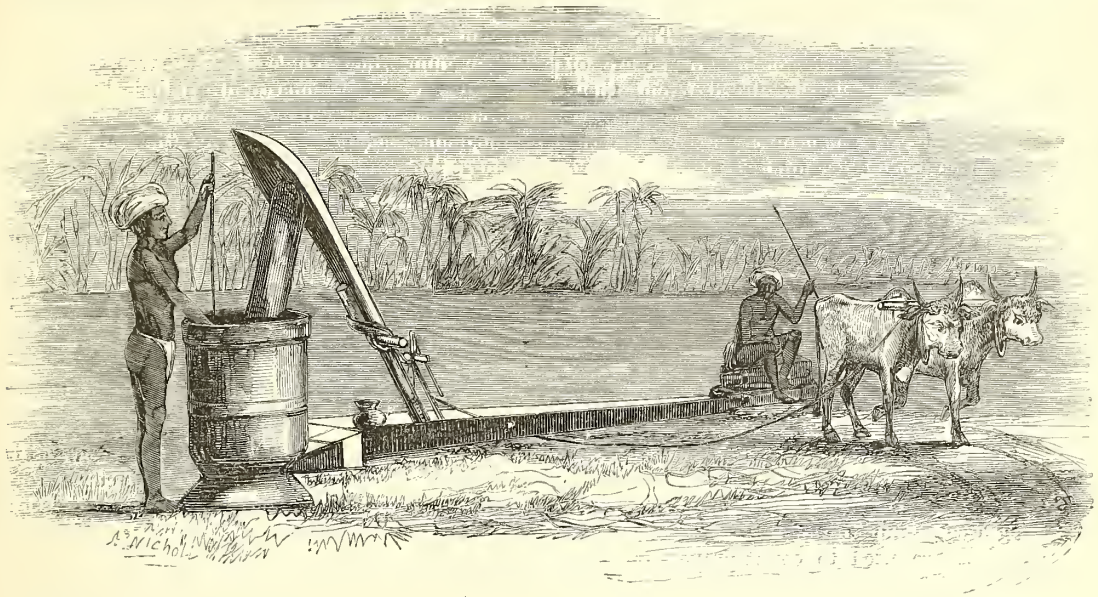
B. latro is not only a gourmand, but a utilitarian: so he cards up the masses of coir, the result of his rending operations, almost as fine as tow, and then transports them to the inmost recesses of his burrow, to form a sort of bed on which to recline, as well as a convenient covering and protection when debarred from the pleasures of society during the progress of shell-shifting. The Islanders are fully aware of his provident habits, and often take advantage of the stores of coir thus collected, making use of them for the various purposes to which fibre of this kind is applied. Nature has wonderfully and wisely provided for these creatures, during periods in which they remain comparatively torpid, stores or magazines of oil, which they carry beneath their tails. Those of some of the large crabs have been known to yield over a quart of excellent limpid oil.

Nocturnal visits are from time to time paid to the sea, but we are not of opinion that, as some

writers have stated, these journeys are performed *every night*. In the breeding season some time is spent by them in and about the salt water pools of the reefs, and the juvenile crabs appear to remain there until strong enough to seek their fortunes with their larger brethren amongst the diggings beneath the tangled roots. When the natives desire their capture they set resolutely to work and dig them out, much as the game-keepers of England proceed with secretive, perverse badgers. Unfortunately for the crabs they are good to eat, and are therefore ruthlessly dragged from their retreats, ignominiously bound with cords (a very necessary precaution by the bye), and carried off into captivity. Some of them grow to a monstrous size, possess nippers of the most formidable description, and often snap the coir ropes with which the crab-hunters tie them, as if they were pack-threads. There are times when a change of diet appears congenial to our friend, when he levies indiscriminate war on all the shell-bearing molluscs he can lay his claws on. He extracts them from their snug shell castles with all the dexterity of an accomplished shell-fish dealer, and then, not content with having eaten up the tenant, he performs a sort of grotesque and triumphal march with the empty house in his claws as if for the purpose of inciting other crabs less nefarious in their dispositions to the perpetration of crimes of a like character: on the whole *B. latro* may be considered by no means a respectable member of the family of crabs, and well deserving of his name. He, however, is not the only robber of the grove, there are several species of coleopterous insects (*Oryctes Rhinoceros* especially) whose larvæ feed on the embryo leaf-buds of the palms and are at times exceedingly destructive to the trees, not uncommonly causing their death. These destroyers hollow out their galleries through the substance of the rolled up bud, and feed on the succulent young fronds before they expand, thereby greatly disfiguring them. The most generally known of these burrowing grubs is the *Tucuma* or *Grugru*, which is about two inches and a half or three inches long, and thick in proportion. It has a hard, black head, and a strong pair of shears-like jaws; but woe be to the luckless colony of Grugrus which may chance to be revealed to the prying eye of the epicurean "black fellow." They are not long allowed to pursue their mining operations, but are lugged forth from their retreats, and either fried crisply like Epping sausages in cocoa-nut oil, or with a little lime-juice squeezed into an empty cocoa-nut shell, made an extempore meal of, by firmly seizing the bead-like head between the finger and thumb, dipping the grub daintily in the lime-juice, and then disposing of the treat, much as we deal with a nicely-shelled prawn and with equal gusto. An ingenious method is adopted by some cocoa-nut growers to rid the trees of the destructive beetles; a number of boys are employed to carefully search for the orifices in the bark; into these, when found, they dexterously insert a kind of beetle-spear, with which each lad is provided; this spear is a long, needle-shaped instrument, with one end barbed like the head of a diminutive arrow or double-bearded fishhook, and the other with a ring turned in it; with this the beetles are either transfixed in their holes or brought forth on the barbs and killed.

The cocoa-nut oil and nut trade throughout the Eastern and Southern seas is of great extent and importance. It has been estimated that the annual importation of merchandise at a place comparatively little known, except by traders (Samoa), in exchange for cocoa-nuts and oil, amounts to £30,000. A vast number of the Polynesian and other islands furnish incredible quantities of both nuts and the oil obtained from them; whilst in the Eastern seas, Ceylon, the Malabar coast, the Seychelle Islands, the Mauritius, and many other islands enjoy an extensive trade either in one or both productions. A number of methods more or less primitive are had recourse to for the obtainment of the oil. In some localities the kernels of the nuts are cut up and boiled in large kettles, then pounded in a hollow tree trunk with a heavy pestle, again boiled, and on the oil rising to the surface it is collected; the contents of about seven nuts thus treated yield a quart of oil. In Ceylon and many parts of the East Indies the quaint contrivance represented in the annexed cut is made use of for crushing the nut kernels; the upright portion in the centre is a sort of round-bottomed cylinder (not unlike a short cannon or mortar) hewn from a block of basalt or other hard and suitable stone; in this the end of a heavy beam of *Baubul wood* is set at an angle and kept constantly travelling round by the bullocks at the end of the yoke-piece. Well do we remember our first introduction to one of these contrivances, and the perplexity and difficulty we experienced to reasonably account for the unearthly shrieks and fiendish sounds we heard when shooting in the jungle. Forcing our way through the tangled thicket, and trailing monkey ropes, expecting to discover it was hard to say what; an open space between the trees was reached and the whole mystery was solved. We beheld a native oil-mill with the patient old buffaloes plodding onwards on their endless journey. We did not, with the head-long valour of Don Quixote, proceed to attack our mill, but sat quietly down on a stone to make a sketch of it, which we, in our prosaic way of viewing matters, thought the wiser course of the two.

When the extraction of the oil is undertaken by merchants or European firms, ponderous iron machinery is erected and used to express it, when about two gallons and a half of oil are obtained from one hundred nuts. Besides that used for home consumption, very large quantities are exported to England, the United States, and other countries, where it is made use of for a variety of purposes, the manufacture of soap and candles amongst them. A great deal of soap thus made in America is sent back to Polynesia to be again bartered for more oil. The dry cocoa-nut chip, after the oil is expressed, is sometimes used as a food for



pigs and poultry, and is an excellent manure. The trees are not uncommonly cultivated with great care; heavy ripe nuts being selected for planting. The young shoot forces its way through one of the eye-holes, and when the young trees are about three or four feet high they are with a little salt placed in pits prepared for their reception.

A strange notion prevails amongst the cocoa-nut planters that the groves are much benefited by having walks arranged and conversations carried on amongst them. "The cocoa-nut tree loves to hear the sound of footsteps and pleasant voices," say they: the idea is a very poetical and pleasant one in its way, no doubt, but, like many others of that order, has its practical disadvantages, as any sauntering, gossiping group would find out to their cost should a ripe well-developed cocoa-nut drop "plump down" on the top of one of their heads. In such a case we are disposed to think the nut would have the best of it, and the thoughts of the luckless saunterer, should any be left to him, would change, like those of Newton when the pippin fell, "from mirth to gravity."

In moderately favourable situations the cocoa palm commences bearing at from ten to thirteen years of age, and remains at full maturity for between fifty and sixty years, producing, at a rough calculation, one hundred nuts annually. The tree then usually begins to deteriorate and fall off in its yield, continuing in this failing condition for about twenty years, when it ceases bearing altogether and shortly dies. It is rather curious that wood of the best quality should be obtained from trees in this state; the *Porcupine wood* of commerce is thus procured, as is the timber of which many of the war clubs and other matters of equipment possessed by the natives are made. The palisades of their fortified villages, the beams, uprights, and rafters of their huts and council chambers are made from the trunk of the cocoa tree, as are the water-pipes used for irrigation, &c. The thatch covering the houses is laid with the prepared mid-ribs of its leaves, and secured with cord twisted from the cocoa fibre; the nets and fishing lines are also made from it; beautifully woven baskets, usually filled with freshly-gathered nuts for the day's consumption, are made from the plaited strips of the leaf; and cocoa cloth protects the fresh green fruit from the sun. Torches are made by binding together a sufficient number of dry leaflets, the end of the mid-rib serving as a handle to hold them by; the trunks of the fruit-bearing palms growing in and about native villages often have numbers of the dry leaves lashed fast to them, so that on any prowling urchin, on plunder bent, attempting to climb the tree, a sharp rustling sound is made and the culprit at once detected. A number of methods are had recourse to for ascending the tall stalks of the palms, according to the district in which they grow. By some persons they are climbed by fastening the two ankles together with a strip of tough bark, making it act as a support by causing it to partly embrace the tree; others cut a row of notches just large enough to admit the end of the great toe, and thus make a sort of staircase of the tree. In some localities a band is cast round both tree and native, when the soles of the feet are applied straight against the trunk, and he literally walks up. The toddy-drawers often throw coir ropes from tree to tree like huge spiders' webs, and then travel about on them much as an overgrown spider would do. An endless variety of beautiful mats are woven from the split leaflets, whilst floor-cloths, bags, and rubbers are made from the fibrous coir of the nut husks and the envelopes of the young fronds. Incredible quantities of coir are now used in this country. The mighty cable, the tough and trusty hawser, and the buoyant life-line are of this curious fibre, some of which may perchance have

been filched from the stores of our dishonest, miserly old friend, *Birgus Latro, Esq.* The cups, bottles, and drinking-vessels for native use are of cocoa-nut shells, ingeniously freed from their contents by pouring out the milk, filling them with salt water, and burying them in the hot sand of the beach, when the kernel decomposes and is removed through one of the eye-holes. Many of these natural vessels are polished with powder made from the burnt kernel and elaborately carved. When mounted with silver they are often used in this country as sugar basins and goblets. Some of the Islanders construct very curious æolian harps from the stretched fibres of the leaves; these they either place about their huts, or on the stems of the canoes, in order that the breeze may play through them. The leaf of the cocoa palm is often used as an emblem of authority, and carried by those empowered to collect any special tribute; and in some districts an offer of marriage is made by presenting a cocoa-nut to the chosen fair one. The lateral leaflets are used to count prayers on, just as a rosary is made use of. When arranged like the leaves of a book, these leaf strips are used to write on with a stylus, much as papyrus was written on by the ancient Egyptians. The *Pia Pia*, or gum which exudes from the tree, is used by the ladies of the islands to dress their hair with, and both the root and flowers are extensively used as medicinal agents. Many of the canoes used amongst the coral islands are composed of cocoa-nut wood; this, when properly grooved and bored, is stitched together with twine made from coir, a slender young palm trunk is set up as a mast, with a rigging of coir cordage; a cargo of nuts, oil, lamp-black, vinegar, sugar, and arrack is securely stowed away, with nut food for the voyage,—

> "The Indian's nut alone
> Is clothing, meat and trencher, drink and can;
> Boat, cable, sail, and needle all in one."

The fresh breeze fills the mat sail, and thrills in plaintive cadence through the harp, the cocoa wood paddle steers the course, and the little Argosy dashes away through the broad sunlight, amongst the crisp-blue waves with her gleanings from the palms. So we bid her and the reader adieu until we meet again to collect together another of nature's cargoes.

THE PARIS EXHIBITION OF 1867.

By G. W. Yapp.

THE Exhibition arrangements have now entered upon their last stage, and on the day that these lines reach the public eye the doors of the Industrial and Artistic Congress will be thrown open, according to promise. Considerable doubts have been raised upon this point, but with no good reason, for the preparations are at least as forward as those of any previous Universal Exhibition, and, as regards the structure itself, far more so.

The building, its glazing, painting, and flooring, were all finished in ample time for the commencement of the exhibitors' fittings, and nothing left to a later moment but the grand vestibule, now completed, the entrances and the decoration of the exterior.

Of the general arrangement of the building we have already spoken, and see no ground to alter our view. The adoption of a curved outline was a grand mistake; it allows of no vistas, prevents any fine perspective effect, produces a most unpleasant sensation in the smaller walled galleries, in which the sides advance or recede from the eye, destroy all repose, and cause an immense deal of extra trouble in the arrangements. To select one glaring instance: there is an admirable system of service railway and tram-ways; the line is brought into the park close up to the building itself, is continued round the whole of the exterior, and is placed in connection, by means of turntables at nearly the whole of the sixteen doors, with two tram-ways, which make the complete circuit of the interior of the great outer gallery or machine court, one on each side. Had the plan of the building been rectangular, the railway would merely have been carried up to the entrance of the machine court, and continued straight through it from end to end.

In an artistic point of view the effect is equally unfortunate; the present edifice is all façade; and what architect, engineer, or artist would undertake to render four thousand feet of frontage beautiful, or even simply elegant, unless he had several years and a rich treasury at his disposal? As it is, half a dozen modes of colouring have been tried, the prevailing tints varying from white to dark maroon or chocolate; but the colouring had little effect upon its boiler-like sides, and the Commission has apparently determined to give a uniform coat of colour. A large portion is now painted with a metallic paint which very nearly resembles in effect black-lead: whether any other colours will be used to brighten up the work does not appear. The only hope is that the introduction of gay flags and other accessories will draw the eye away from the body of the building; and the great pillars are now being dressed with very bold flagstaffs with coloured escutcheons and large gold knobs: when each of them has its bunting, the general appearance will be infinitely improved.

As already stated, there is no grand nave, no magnificent avenue in the building; the only part

in which anything of the kind has been attempted is in the grand vestibule, or principal radial passage, which leads from the chief door to the inner garden, and is bounded on one side by the French and on the other by the British section of the Exhibition. This vestibule is more than three hundred feet long, fifty feet wide, and nearly eighty high; but there is nothing imposing in its appearance. Its roof is of iron, and nearly flat, and the light is almost entirely inclosed from each end, so that the clerestory windows being at a great height from the ground, the lower part of the vestibule is too sombre; and when these windows are filled, as they are intended to be with specimens of French and English stained glass, the vestibule will have more the air of an ecclesiastical edifice than of a crystal palace.

Our neighbours are not to be blamed for the failure in these particulars, and certainly we have good cause for modesty in matters of art; but it is important that failures as well as successes should be carefully recorded for future guidance. The construction of such huge buildings can never be a common event, and therefore each lesson is the more precious.

The French, however, have so much ability in ornamentation, that where the materials or the forms are not unmanageable, they rarely fail to produce a gay and pleasing effect. The inclosed court and garden of the Exhibition, for instance, offered them a fair opportunity, of which they have availed themselves. The surrounding wall is painted in panels, and the upper part relieved by a course of imitation rose-coloured marble, which is exchanged for green marble over the doors leading into the building; the veranda, or *marquise*, which surrounds the garden, is also light and pretty, and apple-green curtains are now being fixed on rods between the pillars, to protect the visitors on the sunny side. The garden within is now laid out geometrically, with one main walk down the centre and three crossing it at right angles; the centres of the four chief flower-beds are occupied by long basins, from which numerous jets of water will enliven and refresh this floral retreat from the Picture Galleries and Retrospective Museum.

The French and English Commissions have entered upon a spirited competition in the matter of fitting and decoration, and the work on each side is now sufficiently advanced to allow of a few critical notes on each. In the first place, the walls of the French Picture Galleries are painted of a low-toned red; those of the English Gallery, of a neutral green or rather olive tint. The former have nearly opaque screens half the width of the galleries, hung from the tie-rods of the roof; thus throwing the centre of the gallery into shade, while the light falls on the walls through white awnings extending from the screens to the walls. In the English Galleries a white awning stretches nearly across, and meets opaque screens at the sides. Here we have two systems which contrast with each other, and the experience of which will be valuable. The general opinion at present is, that whatever may be the relative values of the two plans, there is too much light shut out in both cases. As regards the industrial portion of the Exhibition, the modes adopted by the two commissions are in all respects the antitheses of each other. The French department presents, with few exceptions, a series of courts, or *salons*, each with a design and plan of its own, and in some instances presenting a very artistic appearance; but they are somewhat intricate, and a casual visitor will be extremely likely to miss many things that he would like to see. On the English side, partitions are the rare exception, and the view is nearly uninterrupted all over the court. Standing in almost any position, the visitor will be able to say at a glance, "Ah! there are the beautiful Indian carpets and splendid shawls; I see the colonial riches cropping up there; there is the cut glass; there again are the noble vases from Staffordshire;" and so on;—the world is all before him where to choose, and the pathways are clear and straight. Surely that which is desirable in life in general is advantageous in an exhibition in which no man can see everything, and every one has his peculiar inclinations. There will be no uniformity on the English side, except that a very large proportion of the show-cases will be black relieved with gold, and that all the counters will be covered with maroon-coloured cloth. The management of the space above the avenues of circulation presents the same contrast. On the French side most of the courts are covered with neat white awnings, and the same plan is adopted for the main avenues throughout; so that the roof of the building will scarcely be seen, and the latter will be mostly masked. The English Commission has no awnings, either over courts or avenues; from the top of the cases and counters all is clear to the roof-lights, except where tall objects tower above their neighbours, or where some splendid product of the loom is raised to show its beauties, and the tempering of the light has been managed in a singularly happy manner. In place of white calico, which at first is too glaring, but soon becomes stained and baggy, each glazed compartment in the roof has its own blind made to fit, stretched tightly beneath it. These blinds are not white, but unbleached, and have a diaper pattern all over them, with a garter ornament in the centre, in which the cyphers of Her Majesty and the emblems of the various portions of her dominions alternate with each other. The effect is admirable; and the plan adopted in the British section will render it the best ventilated portion of the Exhibition, which is a very important point.

The original colour of the iron-work in the Industrial Galleries was chocolate, and it still remains so, except on the British side, where it is all visible, and where it would not have harmonized with the colour of the cloth selected; so the whole has been repainted of an olive tint, like the walls of the Picture Galleries.

There is much to do between this time and the opening day, and some complaints about the slow service of the railways on this side of the water

but the work is well advanced, and there is no reason why there should be more than the usual pressure at the last moment.

Every department on the British side is in full activity,—Home, Indian and Colonial, Machinery, Manufactures and Art. In the machine section heavy pieces and foundations are appearing everywhere; and no less than three steam cranes are employed on the rails there. The red jackets of the Royal Engineers recall the exhibitions at home; and the other day these were relieved by the blue cloth of a few of the Royal Artillery, sent over probably in charge of some of our specimens of armament.

In the industrial courts the cases spring up with surprising rapidity, and some of our friends here were struck with the method adopted: they saw the soldiers mark out the floor with a red line, and paint an Anglo-Saxon name in the space; presently they saw arrive on the spot a number of pieces of timber of various shapes and sizes, and the day after perhaps there was a skeleton case in the place, and sheets of plate glass being inserted between its empty ribs. The effect on the minds of our neighbours seemed to be, an impression that there was a considerable chance of Great Britain occupying an excellent position in the field, if not of her absolutely distancing her competitors in the honourable race.

France, Austria, Prussia, Belgium, and other countries, have adopted much the same system upon the present, that they did on former occasions, and, with the exception of what we have already said respecting the first-named, demand no special mention at present; but other commissions present remarkable novelties in the way of ornamentation. The Russian court, for instance, which is quite ready as regards its furniture, presents the most complete arrangement in the building, the whole of its cases, tables, and stands, though varied in shape, are in the same national style, and form an admirable exhibition in themselves; the work is the perfection of solidity, simplicity, and good taste; and, moreover, thoroughly national. It is the usual custom of the country to leave the whole of the surface of the wood of its natural colour, but to colour the interstices and undercuttings; and it was intended to do the same here; but the work itself has attracted so much attention, that M. Grigorovitch, the Commissioner, has, with the advice of several artists, determined to leave the furniture as it is, in order to exhibit the design and workmanship in its purest condition.

Sweden and Norway stand back to back with Russia, and Denmark faces the former. Each of these will exhibit a mass of highly characteristic woodwork, but of a totally different class. It should be mentioned, by way of parenthesis, that as each country has a long strip of space bounded by radii of the building, each presents a very long façade, and this has been taken full advantage of by very many of the commissions. Russia only marks her frontage by a low wooden railing and a series of banner frames; but Sweden and Norway, and several other countries, present a long architectural front. That of Sweden is solid, like the wall of a fortified town; bold arches with overhanging penthouse roofs, odd spires, and castellated work, all speak of the middle ages. Denmark faces her with a frontage of northern renaissance; large flat arches with pine-apples or grapes pendent from the keystone, give the court rather a Bacchanalian air. Portugal also presents a long façade in woodwork, with arches of the same form, but with ornaments, again, of a totally different character.

The geography of the Exhibition is curious. From Germany, passing through Switzerland, we get into Spain and Portugal; then to Greece, Denmark, Sweden and Russia, and Italy. The last-named commission is not quite so far advanced as some of its neighbours, but promises to make a goodly show. Beyond Italy are the Danubian Principalities, Turkey, Egypt, Morocco, and Tunis. Each of these countries makes a thoroughly characteristic exhibition; each has a frontage of the same length, though the depths of their courts vary from two to twenty or more feet, and all are ready, or will be by the opening day.

The Danubian Principalities have never before, that we recollect, taken part in a Universal Exhibition, and we do not know whether the decoration adopted is strictly national, but it is very showy and effective; the façade is composed of a series of arches, and the decorations consist of interlaced work, and foliage in brilliant colours on a dark-blue ground.

The next court is at once recognized by a tablet bearing the Sultan's cypher in gold on a scarlet ground, and the court, which is of considerable size, is laid out with a series of small shops, like those of the bazaars at Constantinople, on one side, and with counters, stands, and *étagères* on the other. The decorations of this court are not yet finished, but the framework and such ornamentation as is executed have the true Oriental air.

Egypt occupies a much narrower space than that of its suzerain, but its façade is highly characteristic, and almost completed; the ornaments are of the kind with which we are well acquainted, and the whole is being brilliantly coloured.

The next slice of the Exhibition is divided between Morocco and Tunis, the former appearing for the first time in such an exhibition. Here we have the horse-shoe arches, and a perfect blaze of colour; each commission has divided its space into two or three pavilions, all of which are covered within and without with geometric patterns of the most brilliant hues, surmounted by inscriptions and paved with parti-coloured cements. The painting in these courts has been executed by native artists, whose Oriental figures and garments have been a source of great curiosity with the visitors. The group thus summarily noticed, presents very curious features and striking contrasts, and will certainly form one of the most interesting portions of the Exhibition.

Between this gay troop and Great Britain there lies only America, which makes but little show yet. The frontier of the British department will vie in

splendour with its neighbours; here the India Board is setting up its cases, and the shawls, muslins, embroidery, and carpets of our Indian possessions need fear no rivals under the sun. England herself, too, promises to show more art than usual, or rather a greater proportion of art than usual, especially in connection with house and ecclesiastical decoration. The Art-Manufactures court is beginning to take shape, and promises to be rich in decorative work in wood, metal, and terra-cotta; but the great show of works in the last-named material is to be found elsewhere. In the great machine court, two specimens of the new Museum at South Kensington, now being erected, attract attention, and the pieces of terra-cotta are much admired for their colour and the sharpness of their outlines: when finished, these architectural specimens will be sixty feet high. Another kindred work is just commenced in the garden; namely, the temple to shelter the boilers which are to supply the machinery of the British department with steam. The boilers are all in their places, and the columns, which are of terra cotta and each in one piece eight or nine feet high, very slender and highly decorated, are now being set up. If the other parts of the structure are as good as the columns,—and the mass of pieces of terra-cotta seem to promise that they will be,—this temple will be one of the attractions of the park.

Close at hand is the Queen's Pavilion, as it was first named, or the English Cottage, as it is now generally called. It is neither a royal pavilion nor a cottage, but it is a characteristic building, exhibiting the features of English domestic architecture, the materials of such structures, such as cut bricks and tiles, and the methods of construction. Until the work is a little further advanced, it is impossible to say what will be the general effect; but the details which are finished hold out good promise: there are five stacks of chimneys,—one square, the others clustered; and nothing can exceed the elegance of these monumental chimneys, which are extremely complicated in form and beautifully sharp in outline; they are, moreover, capped with terra-cotta shafts, some white and others red, which are singularly graceful. Workmen are now busy decorating the front with encaustic tiles and tile mosaics, which are at once novel in style and gay in effect.

In the French part of the park the *Renaissance* house is now a very picturesque and beautiful object; it is a large structure, with a rusticated basement of imitation stone—*béton aggloméré*,—two main floors, and a dormer story. In the front is a projecting bay with gable, and at one corner a large tower, which will probably support a *belvedere;* the roof is sharply pitched and overhanging, the dormer windows are very bold, and beneath is an elegant veranda or balcony. The whole framework of the house is of oak, charmingly designed, and put together in a most artistic manner, and the whole of the woodwork is unmasked, the interstices between the timbers being very small and filled in with plaster, party-coloured white and grey.

The Sultan's mosque is another elegant building approaching completion. It has a graceful dome and a tall minaret, with the *muezzin* gallery. Two of the angles of the building have circular pavilions projecting boldly from the main structure, and these, as well as the door and windows, are profusely decorated with arabesque ornamentation. It is a complete reproduction of the Eastern mosque, down to the small grated window, whose office seems rather to exclude than to admit light.

Behind the mosque of his suzerain stands the imposing group of buildings of the Pasha of Egypt, which have already been partially described in the columns of NATURE AND ART. The interior of the Great Temple is being covered with copies of the mural paintings of Upper Egypt, and the exterior is elaborately decorated in colours, the caps of the columns of the front representing the face of the goddess who seems to have held in Egypt the place of the "goddess Juno with the cow's fair eyes." The building which is to include an Eastern café and the Viceroy's pavilion, is also approaching completion, and will present a rich mass of Oriental decoration analogous to that of the Sultan's mosque. Still further in the rear is the Fellah dwelling, with its cattle-shed, which is intended to exhibit the habitation and arrangement of a peasant dwelling of Lower Egypt at the present day. The Russian and Swedish structures are now almost completely finished, and create great interest; but as these have already been described in our columns, notice of the details connected with them must be deferred to a future period. One of the most conspicuous buildings is that of the Bey of Tunis; it is a structure as large as the town-hall of a great city, and will contain not only a museum, but workshops, a collection of wild animals, and a divan for the Bey, should he visit Paris. It is rectangular, with small cupolas on each side of the façade, and a bold flight of horse-shoe-shaped steps leading to the grand entrance. At the other end of the park the Dutch Commission has just completed a special gallery for its pictures, and a workshop in which the process of cutting and polishing diamonds is to be exhibited. The Swiss, too, are hard at work on their picture gallery.

The French electric iron lighthouse has the framework of its lantern in place, and forms a very striking feature in another corner. This will not be the only electric lighthouse in the park; the English Commission has brought over the framework of another, in wood, which will be erected immediately, so that two systems will be submitted to the judgment of the assembled world.

The *reserved garden*, or, in other words, the horticultural portion of the Exhibition, exhibits as much, if not more, progress than any other portion; the hothouses and conservatories, one of very large size, are nearly all finished, and some are being glazed: they amount to twenty or more in number, and are of all forms and sizes.

The two great aquariums are also finished as regards the main portions of their structure; and now that the whole of their arrangement is visible,

they are even more remarkable than the accounts of them led us to expect. They will contain an immense number of specimens, and the two systems of construction — one consisting of a series of niches in the sides of a large cavern, while the other consists entirely of iron and glass, open to inspection from the sides as well as above and below—will offer useful means of comparison. The cavern system, as adopted in the aquarium of the *Jardin d'Acclimatation*, certainly shows small creatures to considerable advantage, but it has the great disadvantage of presenting only one face to the world, so that only a small number of persons can see at a time. The other system, on the contrary, will accommodate the largest possible number of visitors. The canal, lakes, cascade, and all works connected with the aquariums are ready.

While speaking of the aquariums and their tenants, we must not forget to state that a number of the great carp from Fontainebleau are to appear in a lake in this garden. Some of these fish are very old and of enormous size, and it is a question whether they will take a great interest in the Exhibition; but the Fontainebleau carp are amongst the lions of France, and of course the Exhibition would not be complete without them.

There will be many other attractions in the garden: large collections of living birds,—a number of humming-birds, it is said, amongst the rest; a botanical diorama, in which representations will appear of rare trees and plants which cannot be shown otherwise; and lastly, though not at all consequently, the jewels of the French crown. These will be exhibited in an iron and plate-glass case, which will be let down at night into a strong safe sunk in the ground. In the centre of the garden will be a pavilion appropriated to the use of the Empress. The shrubberies and flower-beds are being planted and arranged, and the greater part of the walks are already gravelled and in fair condition, so that there is little anxiety about this part of the Exhibition.

Another recent visit has furnished us with yet more memoranda. Stained glass is now being placed in the clerestory windows on the French side of the grand vestibule; the floor is being paved with tiles composed of concrete and asphalte, black, with white figures. The model church has also two or more painted windows in place, and the interior is being brilliantly decorated with sculpture and colour.

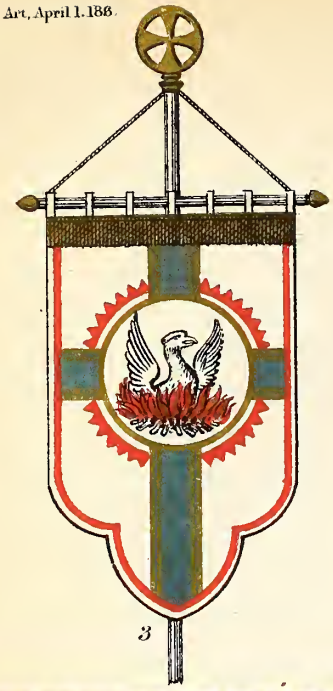
To the above may be added a few observations of general interest. The great extent of the building and grounds has given rise to an interesting nomenclature. Of the sixteen radial avenues in the building, one is the grand vestibule, mentioned above, and the others have been named as follows: *Rues de France, d'Alsace, de Normandie, de Flandre, de Lorraine*, and *de Provence* (an extra secondary avenue, which limits the French section, being called the *Rue d'Algérie*), *Rues des Pays Bas, de Belgique, de Prusse, d'Autriche, d'Espagne, de Russie, d Afrique, des Indes, et d'Angleterre*. In like manner the two great roads in the park are called the *Avenue d'Europe* and the *Chemin circulaire des deux Mondes*. The secondary promenades are called *Avenues*, and the lesser *Allées*, and are named after the French provinces, Scotland, Ireland, the United States, Tunis, Morocco, Japan, Germany, Bohemia, Hungary, Brabant, Zealand, Holland, and other places. The Imperial Commission has also commenced fixing indications, outside the building as well as in the central garden, of the countries to be found in the vicinity of each of the avenues within, the names of all the countries contained in each part being inscribed in very conspicuous characters.

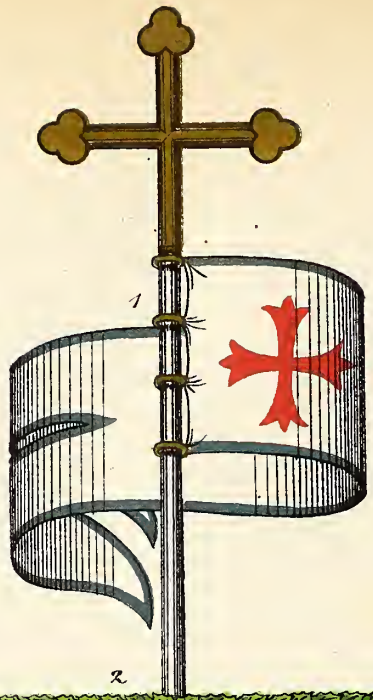
Another arrangement which men of business and others will appreciate, is the establishment of a regular post and telegraph office, with *poste restante* attached; there will also be a branch office in the Club-house, which is situated at another extremity of the park.

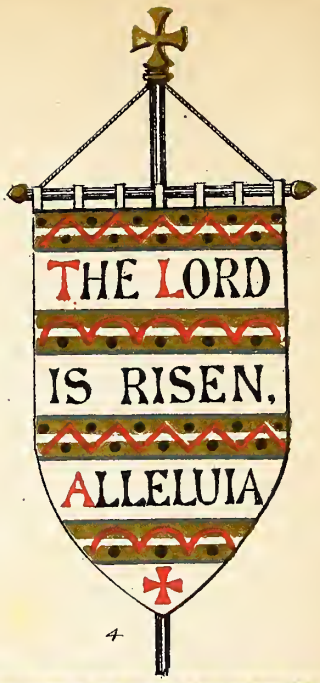
The waters of the Seine have not been friendly to the Exhibition. The river was so full for weeks that little or nothing could be carried on by the water-side; two immense sheds were, however, erected some time since, and they are now being filled with gigantic marine boilers, and other apparatus connected with nautical matters. By the side of these marine sheds are several smaller ones, which are intended to contain yachts, pleasure-boats, and models.

In connection with the general arrangement, it may be mentioned that more than five hundred pages of the catalogue are in type in the office of M. Dupont, the printer for M. Dentu, the concessionnaire, and the sheets, as fast as they appear, are, in pursuance of an arrangement with the Commission and M. Dentu, being translated into English, and set up by Messrs. J. M. Johnson & Co., of London. This will be the first instance of the whole of the catalogue of an universal exhibition being published in any other language than that of the country in which the exhibition occurred. Another very great advantage will be that each of these catalogues will be published in sections, each section containing the whole of the exhibitors of all countries in the same group. This is a collateral advantage arising out of the arrangement of the contents of the Exhibition systematically as well as geographically.

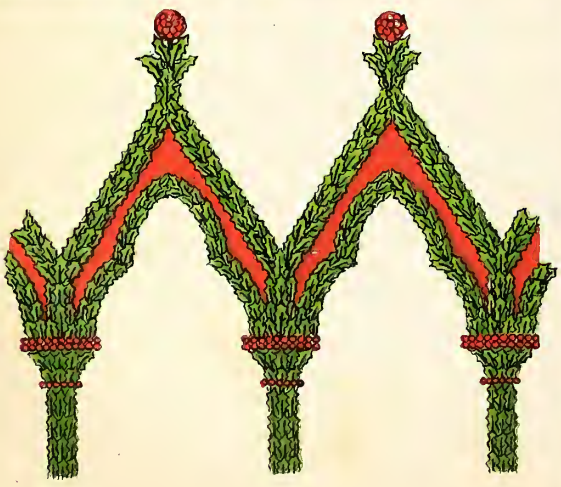
Lastly, we may state that the opening of the last preliminary act of the Exhibition has been marked by the opening of two or three of the French cafés and an Austrian beer-house; and in a few days, after taking a walk in the avenue of Tunis or the alley of Japan, the visitor may lunch in Russia, dine in Great Britain, and take his coffee in France.

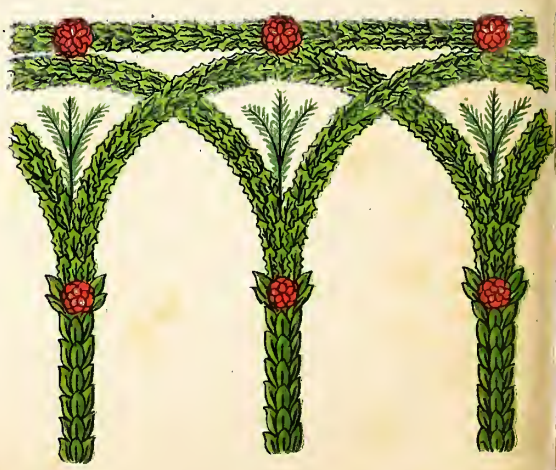





THE LORD
IS RISEN,
ALLELUIA

Christ is risen from the dead,
the first fruits of them that sleep.





FLORAL DECORATION OF CHURCHES.

By W. & G. Audsley, Architects.

EASTER.

HAVING in the December number of Nature and Art given general hints in connection with the Floral Decoration of Churches, and directions with special reference to the Festival of Christmas, we have now to say a few words on the decorations suitable for the Easter Festival, which must be taken as a short appendix to our former article.

All the general hints, or those pointing out the methods of arranging and applying Floral enrichments to buildings of the several styles of church architecture which we gave in our Christmas essay, hold good with reference to Easter, as do also the directions for the construction of the devices and general decorations: therefore it is unnecessary to reiterate either here.

Easter occurs too early in the year to enable us to use many flowers in the decorations. Therefore they have still to partake of the Christmas character and be composed, for the most part, of evergreens. It is advisable to use holly more sparingly than at Christmas, with which season it is so closely associated: the other common evergreens, such as laurel, box, fir, &c., may be used *ad libitum*. For the smaller and more choice decorations, holly, from the beautiful and crisp character of its leaf, should still be used; but the variegated species should be preferred, being lighter and more cheerful than the sombre green.

In Easter decoration all the varieties of flowers that can be procured may be used; those which grow out of doors or are more plentiful being adopted for the general decorations, those from the greenhouse being applied to the enrichment of the Sanctuary.

For the Easter Festival it is not so usual as at Christmas time, to carry decoration through all portions of the interior of a church: but there is no reason why the same amount of enrichment should not be provided. Whatever may be done for the body of the church, it is important that, at Easter, the chancel should be decorated richly, and with the choicest materials. On no account should artificial or everlasting flowers be used. Let everything partake of the true character of spring, that season which is in itself a type of the Resurrection from the Dead.

In the decoration of the chancel, the greatest care should be bestowed upon the reredos and the walls, &c., in close proximity to the altar. Where there is a rich reredos permanently fixed, it will only be necessary to decorate its architectural features with flowers and leaves; and, if there should be a cross in sculpture or inlay in its centre, a circular wreath of choice flowers may appropriately be suspended by two very fine wires, so as to surround the centre of the cross. But, where there is no reredos of any importance, a special decoration should be made to occupy the space over the altar, and any amount of care and attention be given to its construction.

As white is the Easter colour, the ground of all devices should be composed of it. Gold and colours, such as red and blue, may be introduced within the outlines of the floral designs, for the purpose of throwing out the leaf-work and giving solidity to the forms; but the general ground should in all cases be white.

The design in the centre of the accompanying plate will supply an idea for a reredos decoration suitable for the generality of churches. The groundwork may be of strong white drawing-paper, or cloth stretched on a wooden frame. The cross in its centre to be formed of choice green and variegated holly-leaves, with large red, and small white, camellias. The main lines of the side compartments and the border round the whole may be of holly or laurel, with the sprigs in the triangular spaces of fir, as shown, terminating in red camellias or roses.

The walls of the chancel to the height of the top of the reredos may be decorated in several ways and in any degree of richness.

Where the chancel is not large and expense not an object, the lower portion of the walls may be covered with white hangings suspended from rods temporarily fixed up. These hangings may be ornamented with coloured devices, such as small Greek crosses, sacred monograms, and symbols, stencilled (in size or thick varnish colour) at intervals all over them, or with a powdering of small floral ornaments composed of leaves and flowers stitched on. The upper edge of the hangings should have a border either of coloured stencilled ornament or of appropriate texts inscribed within coloured lines, similar to that on the centre compartment of the reredos, Fig. 2.

Other ornamental or inscribed bands may be introduced horizontally at equal distances between the top and bottom of the hangings, the powderings being placed in the spaces between them. The bottom should either finish with a coloured fringe or with a broad border of leaves stitched on in some simple pattern. It will of course be understood that, if it is found expedient, these hangings may be confined to the east wall of the chancel, extending over the spaces on both sides of the altar.

Instead of the hangings, an arcade of evergreens, after one or other of the designs shown on the plate (Figs. 5 and 6), may be adopted; or a diaper pattern may be used, as taste and circumstances direct. Designs for diapers were given in the plates illustrating our Christmas article.

The upper portions of the chancel walls may be decorated by horizontal bands of evergreens, me-

dallions, &c., as recommended for Christmas. The medallions must now, of course, contain the appropriate devices for Easter. The Greek Cross is still the most appropriate form of the symbol for medallions and general purposes, but the floriated Latin Cross is the most suitable for the decoration of the space over the chancel arch or east window. Although the Latin, or Calvary, Cross was out of place at Christmas, it becomes one of the important symbols for Easter. The true Eastern Cross, however, is that variety which is termed the Resurrection or Victory Cross. It consists of a cross placed on the top of a tall staff or spear which has attached to it a small white banner, Fig. 1. This cross may be placed as shown on the plate, viz., issuing from behind the reredos, or two of them may be used, one on each side of the reredos and altar. In almost all representations of our Saviour's Resurrection He is depicted bearing this form of cross in His hand.

Other emblems sometimes adopted for Easter, on the authority of the early Christians, are the Phœnix, the Peacock, and the Lion. These may be depicted on banners, shields, or medallions.

Banners and Shields may be used in exactly the same manner, and to the same extent as at Christmas. They may be ornamented with the following devices in gold and colours: the various forms of the Greek Cross, the Latin Cross Fleury, the Agnus Dei, the monograms of the Saviour's Name with or without crowns over them, the before-mentioned emblems, the entwined triangles, and any Easter texts, as in Fig. 4.

A chancel or rood screen is a most appropriate and beautiful feature at Easter. It may be made of light wooden framework, and be covered with evergreens enriched with flowers. Shields and banners may be used to add colour and effect to it, and a richly coloured and gilded Cross Fleury should in all cases surmount the centre archway.

In the decoration of the nave, our directions for Christmas may be followed in the general details, although it is not necessary to ornament that portion of the interior so fully at Easter.

THE FATE OF DR. LIVINGSTONE.

To the Editor of NATURE AND ART.

SIR,—It was not my intention to have written for publication anything concerning the reported murder of Dr. Livingstone; but, having been requested by several friends as well as by yourself, to express my opinion respecting the credibility of the statement made by the fugitives to Dr. Kirk, I do not feel that I should be right in withholding it from those who may flatter me by attaching some value to the few remarks I have to offer. Perhaps it may be best to state the impression on my own mind at once, and then to cite such incidents as have influenced me in forming it.

I should be loth to abandon all hope of any African traveller until his death were certified by evidence that left no room for doubt; and in this I agree with Sir Roderick Murchison, who, in his letter read by Sir Henry Rawlinson at the late meeting of the Geographical Society, refers to the many travellers who have returned safely after having been reported dead—in many cases by deserters from their service, who, to account for their return, would not hesitate to concoct a plausible fiction.

At the same time, I must confess my fear that the melancholy intelligence is true outweighs my hope that it is false; and this because, from my personal knowledge of Dr. Kirk, I cannot think that, with the opportunity of cross-examining nine men who all protest they helped to inter the body, he would have failed, between the 5th and 26th of December last, to have broken down the evidence had it been untruthful. Still, I know how cleverly and circumstantially the natives can get up the history of such a scene; and, until Dr. Kirk's letters containing the details of the narrative arrive, or further confirmation be obtained from him, I would not quite despair of the life of the great explorer.

There is hardly a traveller that I have known in Africa whose death has not at some time or other been reported. Perhaps his native servants, terrified at his audacity in pushing onward toward some tribe renowned for prowess and ferocity, actually believe that he is hastening to his death, and that it would be madness to involve themselves in his fate. Their own fears gradually convert themselves into a self-deceptive certainty, confirmed perhaps by some rumour that may overtake them as they return. Or, if not so confirmed, their tale, truthful enough perhaps up to the time they left, needs only the addition of a few incidents, easily suggested to the native mind, to involve in grief the friends of the traveller, who may be safely pursuing his journey. Sometimes a more clever or less timid servant will profess to be the bearer of important letters which he will show to none but the person they are for, and thus is assisted on his way by natives and by colonists until the imposture is discovered. Many cases of this kind have happened within my own knowledge or that of my friends. My own life has been made the subject of a bet, and the first person who met me on my return greeted me not less heartily because my safety proved him the winner of the wager. The safety of Mr. Chapman and myself was at one time almost despaired of; and in the *Cape Advertiser* of December 17th, 1863, it was stated, on the authority of a letter from the governor of Senna, that Dr. Livingstone, who had started for Lake Nyassa in August with a party of only five Makololo, had been murdered. Another report was that he had been dangerously wounded in a fray; but the editor very sensibly appended a remark that Dr. Mellor, who arrived in safety with the letters, had also on a previous occasion been reported dead.

These instances will be enough to show that the reported fate of Dr. Livingstone is still open to doubt; but on the other hand I cannot see sufficient inconsistency in the short abstract of the narrative already published, to warrant an imputation of untruthfulness. Dr. Livingstone had previously been deserted by, or had dismissed, the servants who accompanied him from India. The buffaloes brought from the same country in hope that they would withstand the attacks of that deadly cattle pest the Tsetse fly, had died. He was still accompanied by the Johanna men, and had most probably also hired native porters to carry his necessary stores. Little or no regularity of march would be attempted. Rough and narrow foot-paths would wind through forest or low bush. The Doctor, it is said, with half his party, was in advance when the attack took place. Probably those who were behind would hear the noise of the affray even before they came in sight of it. Only one man professes to have seen the fatal blow, and he might easily escape the observation of the parties intent only on the conflict in which they were engaged. That they returned at night is by no means impossible; and, being Mahometans, they would be more likely than native Africans to think of burying their leader. Perhaps the murderers left little that could be brought away

as relics; but the statement that the body bore but one wound favours the inference that, from some cause, they had not indulged in the barbarous gratification of mutilating their victim.

In one instance of the massacre of a peaceful village by a band of Matabili, while Mr. Chapman and I were returning from the Zambesi, the two or three survivors, who had escaped through being absent, told us that at nightfall they not only approached the Matabili army, but actually came near enough to talk to them, having full confidence that they could escape before men starting suddenly from the blazing camp-fires could become sufficiently accustomed to the darkness to see them as they fled.

Still later, when crossing the desert at the end of the rainy season, the anticipated drying up of the scanty pools obliged us to push the oxen across the intervening spaces at a rate which the Damaras, enfeebled by recent fever, could not keep up with. We could not send them in advance till a track had been marked by the passage of the wagons; and the convalescents, attended by a number of healthy men, were allowed to follow at their own pace while we waited for them at each successive water. The country was, at that time, full of the edible roots on which they chiefly live; and, faring well as they came along, they were in no hurry to overtake us. At length, they failed to come up to us; but, anticipating no danger, we left food for them at each halting-place, and on reaching the Bō-tlét-lē river, Chapman paid the headmen of the villages in advance for supplies to be furnished as they came up. Henry Chapman joined us at the Lake Ngami, and a wagon with provisions was immediately sent back to their assistance; but, alas! only two men and two women were found alive. They, being a little in advance of the rest, had slept separately, and returning in the morning had found their unfortunate country people lying murdered at their bivouac. A party of marauding Matabili had penetrated into the country we had deemed perfectly secure from them, and eighteen or twenty men and women of our little party had become their victims. In terror and bewilderment the survivors resumed their journey, when the murderers, revisiting the scene of slaughter and finding fresh foot-prints, followed and robbed them of their little ornaments; but satiated apparently with blood, allowed them to depart, charging them to tell Chapman who it was that had killed his people.

These MATABILI, who, under the despotic chief, Moselekatse, have for more than thirty years been the scourge and terror of the native tribes to the south of the Zambesi, are of the same stock as the MAZITE, or AMAZITU, mentioned by Dr. Kirk. Both are offsets of the AMAZULU, or ZULUS, occupying the country of Natal; and it would be interesting at some other opportunity to consider, in connection with the southward migration of the Kafir tribes—pressed onward, probably, by the progress of the Arabs in their rear,—this reflux of the Zulus to the North. The Mazitē crossed the Zambesi near Shupanga, perhaps ten or fifteen years ago, and spreading the terror of their name by indiscriminate massacre as they passsed northward, settled, at last, in the country to the west of Lake Nyassa, in latitude between 11° and 12° south. Mr. Horace Waller, who was one of the mission under Bishop Mackenzie, tells me that during the war the Mazitē took part with the Ajawa, and that some of their shields were found either on the field or in the huts they abandoned.

If the MAZITE have in reality committed the crime, as we have too much reason to fear, the cause of their hostility to Dr. Livingstone may be traced to his endeavours to suppress the slave trade. It will be remembered that in January, 1861, the Oxford and Cambridge mission reached the mouth of the Zambesi, and were met by Doctor Livingstone, who acted as their guide and adviser. A short trip was made to the Rovuma, a river to the northward, but the party returned to the Zambesi, and in the steamer *Pioneer* commenced the ascent of its tributary the Shirē (or Shēērēē). Here intelligence was received of the recent passage of various gangs of slaves, and another gang, bound to Tette, arrived soon after Dr. Livingstone had reached the village. The black drivers took to flight as soon as they saw the faces of the English, and the captives contrasted in astonishment the humanity of their liberators with the brutality they had hitherto experienced, and these people eighty-four in number became the nucleus of the intended missiou village. Other parties were followed up; the drivers, many of them agents for Portugueso in Tette, were detained, but eventually escaped, and a collision took place with the Ajawa tribe, who were returning in triumph with a long string of Manganja captives.

The mission was settled among the Manganja tribe, who, after the departure of Dr. Livingstone, appealed to Bishop Mackenzie to assist them against the continued raids of the Ajawa. At first he declined, but at length, moved by the natural feelings of humanity, consented, with the full approbation of his colleagues. I do not pretend to decide whether it be wrong for a clergyman to engage in war; but if he erred, he, as well as the Doctor, in the liberation of the slaves, did so on the right side; and I fancy that few Englishmen placed in the same circumstances would have done otherwise. The Bishop, in his journal for August 27th, 1861, states, as his reason for consenting to lead the Manganja force, that they were attacked by marauding and murdering parties of Ajawa, who were constantly burning their villages, slaying their men, and carrying off captives to be sold to traders from Tette. At the same time, he says that the Manganja were nearly as bad; and using this opportunity he stipulated that, in return for his services, they should cease to sell their own people or encourage slave traders amongst them. He says that on the 13th, with the unanimous consent of his party, he proceeded to meet the enemy, and, appointing Waller to command in the actual fight, went unarmed with him to seek a parley with the opposing chiefs. The attempt failed; but in the succeeding battles the Ajawa were defeated, and among the spoils were found shields of the Mazitē, who had joined them. The Manganja, in spite of the efforts of the English, behaved in victory as savages will, and violated their agreement by killing or retaining in captivity a number of women and children; in consequenco of which, the Bishop refused again to lead them, though in the following January (1862), he was compelled to punish a petty chief who had attacked a party sent to explore a path by which to bring up the ladies, who had arrived at the Zambesi with the intention of joiniug the Mission. The unfortunate death of Bishop Mackenzio and Mr. Burrup, in consequence of hardship and exposure, took place soon afterwards.

Dr. Livingstone and his expedition had moanwhile explored Lake Nyassa and its western shore; and in about 11° 40′ S. he fell in with a few Mazitē, who, failing in their attempt to terrify him, became themselves alarmed and fled, though others gave much trouble both to the land party and to Dr. Kirk, who was at that time in charge of the boat. The country around was desolated by these savages, and strewed with the skeletons of their victims. The fountain-head of the slave trade seemed to be there. Two Arabs had built a dhow upon the lake, and were running her, crowded with slaves, regularly across it; and it is said that 1,900 from this locality pass annually the custom-house at the Arab port of Zanzibar, exclusive of any sold to the Portuguose. On the melancholy events which led to the abandonment of the Mission, the prostration of most of the party by fever, the death of Mrs. Livingstone (herself the daughter of Moffatt the missionary pioneer), and of the accomplished young geologist, Richard Thornton (induced by tho hardships of a journey undertaken to procure animal food for his perishing friends), and on other sad details, I have not space to dwell. My object in citing the foregoing facts has been to show the possible cause of the hostility of the Mazitē; and they afford, I think, sufficient evidence that a feud not likely to be forgotten already existed between the Mazitē and the English, even if the predatory habits of tho former were not sufficient to incite them to attack the weak and overburdened party with which Dr. Livingstone (travelling from the east coast, and having already passed tho northern end of Lake Nyassa) was traversing the borders of their country. It is not improbable, too, that their hostility would be fostered by persons interested in the continuance of the inhuman traffic he so strenuously endeavoured to suppress. For the majority of the real Portuguese whom I

have known in Tette,* I think I may say that they would regard with the same horror as ourselves a dastardly attempt to make the savage an instrument of assassination, and will look on the reported murder of the Doctor with equal indignation; but on this point I would refrain from dwelling till the expected letters of Dr. Kirk inform us of the details he has been able to collect.

The career of Dr. Livingstone as a traveller and a philanthropist needs no eulogy from me, neither am I the man from whom it ought to be expected; but as one who, for however short a time, has travelled with him, I may express my admiration of his many excellences, and pass as lightly as possible over the failings which served as foils to them.

His energy and perseverance as an explorer could not fail to be appreciated by every one, and his self-reliance and power of adapting himself to new emergencies were shown when, having been led by false reports to dismiss from his expedition men who with heart and hand were helping him to their utmost, he applied himself energetically, if not altogether successfully, to the various tasks thus needlessly devolving upon him.

His life may be said to have been devoted to the cause of the native Africans, among whom he lived till he almost identified himself with them. Warm-hearted, generous, and self-sacrificing, his indignation at the wrongs they suffered led him not unfrequently to injustice towards the colonists, the majority of whom would look with abhorrence equal to his own on such outrages as individuals occasionally might be guilty of. As to his disregard of personal interest, it is sufficient to state that, in addition to the funds supplied him by the Government and by sympathizing friends, the greater part of his own property was spent in the prosecution of the course he considered it his duty to pursue.

While there yet remains a ground for hope, I would fain, in common with the friends of science and philanthropy, indulge it to the utmost. If, as I much fear, the report is true, all private differences must be merged in heartfelt sorrow for the great explorer. If not, no one will rejoice more heartily to welcome his safe arrival, or to meet him in England, than,

Sir, yours truly,
T. Baines, F.R.G.S.,
Late Artist of the Zambesi Expedition.

20, Northumberland Street, West Strand,
14th March, 1867.

March 18th.—The detailed letters from Dr. Kirk have arrived, and state that the party, having crossed a marsh at the north end of Lake Nyassa, were passing through a wooded country when the attack took place. Still later information from Dr. Kirk will be read at the meeting of the Royal Geographical Society on Monday next.

* Tette is the chief town on the Zambesi river, in Portuguese territory, nearly 300 miles from the sea.

REVIEWS.

Les Insectes. Par Louis Figuier. Ouvrage illustré de 605 figures. Paris and London: Hachette & Cie. 1867.

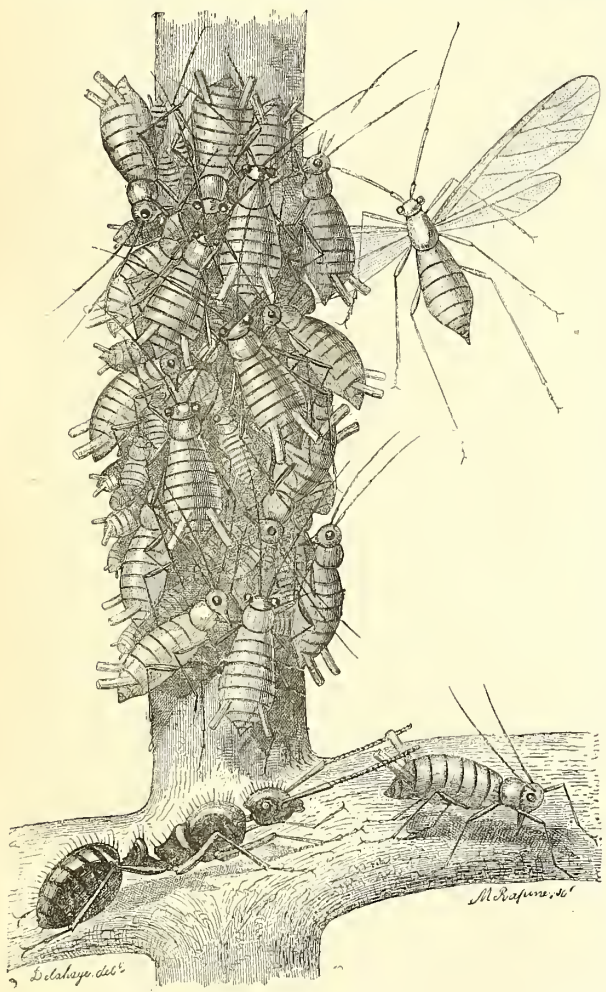
IF we glance at the animal world in its entirety, we find that its various members range themselves under five principal divisions, which are known to naturalists as sub-kingdoms. Beginning with the lowest, we find such forms as the sponge and infusorian animalcules, which possess little more in the shape of digestive organization than an extemporized stomach; these, with some others, form the first sub-kingdom *Protozoa*. Then we find the polyps, sea-anemones, jelly-fishes, hydræ, and corals, forming the sub-kingdom *Cœlenterata*. Next in order we have those soft creatures, generally provided with an outer covering of shell; these constitute the sub-kingdom *Mollusca*. The worms, spiders, leeches, centipedes, and insects belong to the sub-kingdom *Annulosa*. Lastly, we have quadrupeds, birds, fishes, and reptiles, which, being provided with a backbone made up of what anatomists call vertebræ, are styled *Vertebrata*. It is with the sub-kingdom Annulosa that we have to do in the present article. The creatures belonging to this section of the animal world are distinguished from all others by having the body divided less or more distinctly into a number of rings or segments, which are placed end to end. They comprise a number of sub-groups, called classes, which may readily be distinguished by well-marked features. It is to one of these classes we are about to introduce our readers,—that of *Insecta*, or insects, as they are generally styled. An insect may be defined to be a six-legged, air-breathing, ringed animal, having its body divided into three separate parts, head, chest, and belly, and being usually provided with wings. This definition is, we believe, unimpeachable, and having given it, we may therefore pass on to the particular divisions of the class in which the species forming the heading of this page hold their place. Insects are of two sorts,—those in which the mouth is made for suction and converted into a proboscis, and those in which the jaws and their corresponding parts are separate from each other, so as to admit of chewing and eating movements. Now the Aphides belong to the former, and the Ants to the latter; the one coming under the order of Bugs (*Hemiptera*), and the other to the tribe of Bees and Wasps (*Hymenoptera*). Having given these preliminary and somewhat dry, though necessary, particulars, we now come to the Ants and Aphides themselves.

The study and pursuit of insects have from a very early period in the history of civilization possessed great fascinations for lovers of nature. The wonderfully complex construction of these creatures, their singular habits, their extraordinary varieties, their almost human intelligence, their remarkably arranged homes, their brilliantly coloured garments, their peculiar sounds, and, above all, their astounding metamorphoses in passing from their juvenile to their mature condition, have given them an interest to the student of natural phenomena such as no other animals present. In no department of entomology are all these qualities of insects seen in a higher degree of perfection than in the group of bees and wasps, to which the singular little creatures we are about to describe belong. In this order we have numerous examples of the beautiful hues, strange habits, and remarkable instinets of the insect, and few of its members exemplify our remarks more fully than the ants (*Formicidæ*).

There are not many of our readers to whom the common ant (*Formica rufa*) is not familiar. Who in his summer rambles through the fields has not fallen on an ant-hill—a little mound of earth rising from the level plain—a veritable subterranean city, full of life, and busy with the thousand labours of an industrious population? Who has not seen the little, brown, active creatures running to and fro apparently in confused bustle, but really moving according to a system of rigid discipline that would do credit to a human populace? Who has not watched their movements and wondered at their industry and ceaseless activity? The ant is an insect of the gregarious type; it lives in colonies, and like the common bees and wasps differs from its fellow species in many particulars of organization and mode of life. The reader who desires to follow out the subject should consult the beautiful volume which has just been published, and on which we found this article. But we shall try and give a general account of the economy of the ant-hill in these pages. Ants, like most insects which live in colonies, are divided into three kinds,—males, females, and workers or neuters; of these the two first are

ANTS CAPTURING AND MILKING APHIDES.

alone provided with wings, and this is why there is such a general impression that the ant is wingless. The body in all cases is borne upon three pairs of slender limbs, the antennæ or feelers are jointed, and have great freedom of motion. The mandibles or jaws are horny and powerful, and serve as teeth and weapons of offence. The males are somewhat larger than the workers, and the females are of greater size even than the males. Their larvæ, or young, when in the caterpillar condition, spin a delicate silken envelope forming the cocoon. Finally, to complete the general characters of our ant, it is not provided with a sting as is generally supposed, but is capable of secreting a pungent and acid fluid, known as formic acid, which it drops into the little wound inflicted by its scissor-like jaws, thus producing a considerable deal of itching or *formication* (*formica*, an ant), as it is termed. The worker ants, which are both sexless and wingless, are those which engage in all the important labours undertaken by the colony. The male and female are alone concerned with the production of the young; they may be seen in great numbers, in the neighbourhood of ant-hills, towards the end of the summer; when they have completed



SECTION OF AN ANT-HILL.

their metamorphoses, they leave the colony, and flying into the air, perform the functions allotted to them; the males thereupon ceasing to exist, and the impregnated females dropping their wings and returning to the original colony, or forming a new one, and depositing the ova in a place prepared for the purpose. But it is to the workers that we must look as exhibiting the qualities of insects to which we have already referred. It is they who construct the ant-hill, guard its various entrances, provide the "lying-in" chambers for the females, take care of the eggs till their conversion into larvæ, and afterwards feed and watch them with the tenderest solicitude, till in course of time winged males and females appear, and the period of swarming occurs, as in the case of bees.

Among the many remarkable proofs of the ant's intelligence, the construction of its habitation is not the least interesting. The ant-hill varies in point of architectural features according to the species; but in the case of the species to which we have alluded (*Formica rufa*), it assumes the typical shape, and presents itself as a little hill or mound rising some inches above the surface. It is composed of all sorts of débris which the ant finds in its chosen spot,—bits of wood, fragments of leaves, grains of corn, pieces of other insects' skeletons, little bits of broken straw, and such-like. But this elevation is really only a portion of the ant-city, which extends to a certain depth into the soil. If we make a careful cutting through an ant-hill, we shall see hundreds of channels or avenues tunnelled through the ground, and communicating with each other, and with those which traverse the dome-shaped portion of the habitation (see figure). The external apertures of these galleries are very large, but they are carefully barricaded during the night, and on wet days, and are thrown open in fine weather. At first these domiciles consist of a single channel hollowed in the earth, but gradually the number increases. The *worker*-ants tunnel away unceasingly, and carry out the excavated earth in the form of little pellets, till at length a complete labyrinth is formed, corridors, chambers, and halls, often communicating by means of vertical passages, make their appearance, and finally we behold a large central chamber supported by rude pillars of earth, and into which the several passages lead. It is in this latter that we find most of the ants when we open an ant-hill. Generally these hills measure from about a foot to a foot and a half high, and are equally broad; and some writers who take a higher view of the ant's intelligence than we do, look upon them as true fortresses in which each tunnel has a distinct and foreseen relation to its fellows, which are defended by various ingenious devices of construction, and which are always carefully guarded.

We come now to another page in the history of these insects,—to that which describes the production and nursing of the young. The females, who usually occupy a special part of the colony, seem, contrary to the views of those who slander the gentler sex, to live together in the most perfect harmony. In course of time they lay a number of extremely minute, white, spherical eggs, and with this operation end their duties to the colony. To the workers is consigned the important labour of incubating the eggs, and rearing and nursing the young. They take charge of the ova the moment they are laid, and remove them to chambers specially arranged for their reception. A certain amount of warmth is required for the development of the eggs into larvæ, and this is procured by removing the ova in fine weather from the cells, in which they have been detained, into the open air. There they are exposed to the sun's rays —care being taken that too high a temperature is not imparted to them—for some time, and then the ever-active workers remove them to the nurseries. It is this process we see going on in summer time when we disturb an ant-hill. Myriads of the busy little insects may be seen rushing about laden with little white grain-like bodies, of which they take the greatest care, and eventually succeed in carrying beneath the surface. These white, grain-like bodies are the larvæ, and as some of the earlier observers fancied they were grains of cereals, seeds, and such-like, the ant acquired a reputation for thriftiness and providence which it certainly does not deserve. In about fifteen days the eggs are hatched, and

the larvæ make their appearance as little whitish, semi-transparent, ovoid worms. They possess a head and body, the latter being divided into a number of rings or segments which are unprovided with feet. Their mouth is a sort of retractile proboscis, in which we may see the rudiments of the future mandibles, but at this period of their existence it is only employed for sucking. They feed upon the peculiar honey-like fluid provided for them by the workers, who prepare it in their stomachs, and then disgorge it for the nourishment of the young. The most sedulous attention is paid by the worker-nurses to the larvæ, the latter, as we have already stated, being constantly removed from their underground chambers to the outer surface of the ant-hill, where they receive the genial influence of the sun, and thus further their metamorphosis. The nurses, too, advance this phenomenon by gently irritating, rubbing, and distending the skin of the larva with their palpi. Soon this metamorphosis takes place. The little larva spins its temporary greyish-yellow silken coffin, and becomes a nymph, or pupa. Gradually beneath the veil under which Nature conceals her mysterious operations, the larva is transformed into a nearly perfect ant, the proboscis disappears, and is replaced by a set of horny jaws, the skin changes its colour, assumes a reddish-brown tint, powerful and strangely organized limbs are formed, and the head and its appendages increase in complexity of structure. These singular changes all take place, and yet the creature remains motionless and death-like, and when the metamorphosis is complete, the nurses once more commence their labours. They now tear away the curtain and disclose the perfect insect or *imago*, as it is scientifically termed. Nor do they cease their tender exertions. They still continue to watch over the welfare of the new-born, till they are able to take their own place in their little sphere of existence.

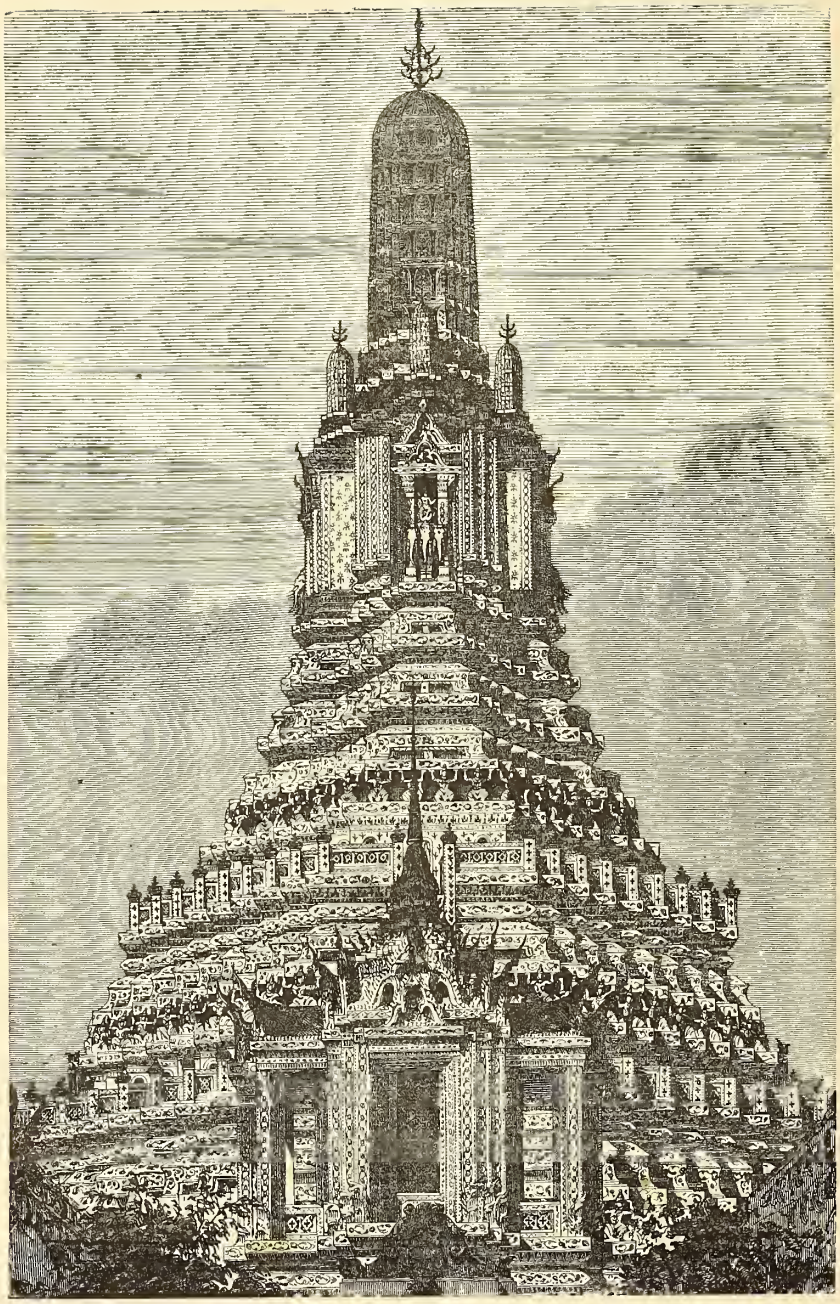
On the subject of the habits of the ant, M. Figuier is very eloquent; and, although he is in most instances supported in his statements by higher authorities, he occasionally treats us to tales which the light of experience and of scientific observation has shown to be fallacious. Still he is always interesting, and generally instructive. Speaking of the dealings of the ants with each other, he gives them credit for the practice of a higher philosophy than that which guides mere human actions. If, he says, an ant is fatigued, a comrade takes him upon his shoulders. Those whose thoughts are too busy with their labours to induce them to search for food, are carefully fed by those who are less occupied. When an ant has received an injury, the first of his fellows that meets him takes him in charge like a good Samaritan, and conveys him to his home. When he discovers a rich mine of food, he does not selfishly keep the information to himself, he tells his companions, and forthwith all join in the festivity. If one of these insects is hungry and cannot procure food, his neighbour, like the Roman daughter of old, feeds him from his own substance—disgorges a drop of saccharine fluid which his hungry companion quickly devours. It appears that in all these cases the feelings and ideas (if we may use the expression) of the ants are conveyed to each other through the antennæ, which by rubbing against each other seem to give expression to their sensations. Finally, to conclude this portion of our subject, we may state that the age of the ant is unknown, but there appears to be no doubt that it may live for several years. Its food is chiefly fresh and decayed fruits, flowers yielding honey, &c.; but the ant will eat dead animal matter, and will even attack other insects and devour them.

Apropos of the food on which the ants subsist, is the second division of our article, that which refers to the *Aphides*, or plant-lice, as they are generally styled. The ants and aphides are in no way related in the sense of affinity; the former are mandibulate or chewing insects, whilst the latter are haustellate or suctorial. But there is nevertheless a very intimate relationship—that of captor to slave—existing between them. Still the relationship is a friendly one. There seems to be no example of harsh treatment on the part of the masters, and the serfs appear to be tolerably contented with the lot that has fallen to them. There are, we imagine, few of our readers who have not seen the aphis, and yet we dare say very few remember what the insect is like, and still fewer know aught of his history. If any one who plucks a rose from a rose-bush takes the trouble to look at the stem and leaves, he will, in nine cases out of ten, find it covered—almost to swarming—with small green insects, generally devoid of wings, and of a hue resembling that of the leaf. They are curious, though hardly handsome objects, and the observer finds them so sluggish in their movements, that so far from attempting to make their escape they allow themselves to be crushed in hundreds beneath his fingers. If the observer is sharp enough in point of perception, he will find that the leaves on which these insects have rested, are covered over with little drops of a miniature dew which has a sweetish honey-like flavour, and if he pushes his inquiries further, he will discover that the insects and the drops stand to each other in the relation of cause and effect. The aphides leave this deposit on the plants, but how? This is the question which the earlier naturalists, Linnæus, Bonnet, and Pierre Huber, were long seeking to answer. But we may fairly presume the ants had answered it for themselves in even pre-Adamite ages. The aphis presents at the extremity of its abdomen, a couple of little moveable tubes which appear to be connected with a sugar-secreting gland, and if we carefully watch these, we shall see from time to time that a small gelatinous drop exudes from their open ends, and falls upon the leaf. Now it also happens that in nearly every case where aphides are clustered upon a stem or branch, a few ants may be seen running nimbly here and there among their lazy neighbours, and if we look closely, we shall see that the ants are not there by accident, but that they have come in search of the little sugary droplets which exude from the abdominal tubes of the aphis, and of which they appear to be immensely fond. This, then, is the secret of the affection which the ants have for the aphides—the latter are a sort of milch cattle which supply them with food. Frequently the ant waits patiently till the aphis drops its sugary secretion, and then it licks it up greedily. But it also often occurs that it stimulates the aphis to give out this secretion, in order to satisfy its desires.

The careful observations of Pierre Huber* proved, beyond question, that the ant knows that by gently touching the abdominal tube of the aphis it can cause the latter to eject the peculiar fluid, which is secreted in its gland (see Plate). And that it makes use of this knowledge is a certain fact, which has been over and over again corroborated by naturalists. The ant doesn't endeavour to irritate the aphis; it simply touches its tube with a gentle stroking motion which seems to soothe the gorged insect and promotes the discharge of the saccharine droplet. In fact, the aphis appears to enjoy this process of milking, and the ants, to use a modern expression, utilize it. The next feature in the relationship of these two insects is the bondage of the aphides. Singular as the fact may seem, it is still perfectly true, that the ants capture the aphides, bear them away, often on their backs, to their underground dwellings and keep them there, not indeed as prisoners of war, but as a Southern planter used to keep his slaves, or as we keep our cattle. They treat them with no harshness, nor do the captives appear to suffer any discomfort from their captivity. They are provided with chambers of their own, and save that they are compelled by their masters to yield the delicious secretion which they value so highly, they fare in all respects as well as any member of the strange community in which their life is passed.

There are many other traits in the ant's nature which well deserve attention, but to which we cannot refer here. Those interested in the matter should pursue the study practically to pursue it profitably. Indeed the whole insect world is peopled with creatures, each of which should have a history of its own, were insect intelligence to receive its due. But as few of us can be practical naturalists beyond a limited extent, and as many are desirous of knowing the leading principles of the science of entomology, and some of the curious facts in the history of insect instinct, we cannot do better in conclusion than say that in

* *Recherches sur les Mœurs des Fourmis indigènes*, a work often quoted in M. Figuier's pages.



THE GREAT TOWER OF THE PAGODA WAT-CHING, AT BANKOK.

M. Figuier's volume they will find reading to their heart's content. Although in some respects (we allude more particularly to the department of physiology) the work has defects, yet, taken all in all, it is one of the finest, fullest, and best illustrated popular treatises on entomology we have yet seen.

A History of Architecture in all Countries, from the earliest times to the present day. By James Fergusson, F.R.S., &c. &c. John Murray, Albemarle Street, 1867.

THE time is not so very long since architecture was taught as being wholly comprised in five orders. There were the Doric, Ionic, Corinthian, Composite, and the Tuscan. The Gothic might have been mentioned; but the authorities of the time would only tell you that, being so very barbarous, it ought not to be included in the word architecture. How wonderful is the change. The Gothic has completely taken the place of the five orders, so much so, that some of the most modern architects know little more of them than their names. With this change there has also come the knowledge that there were many other styles of architecture in the world, all of them as important as those of Greece and Rome. It is now clear that the architecture of Greece cannot be properly understood without a previous study of Egyptian on the one hand, and of Assyrian on the other. Gothic appears in Venice allied to Byzantine, and the Byzantine again is allied to the Arabic. The Assyrian and Persian lead us into India, and the study cannot be arrested till we have included the architecture of Ceylon, Burmah, Siam, and China. All are allied by links which it is necessary to recognize before the history of architecture can be understood.

VIEW OF EXTERIOR CORRIDOR, NAKHON WAT.
From a Photograph by Mr. J. Thomson.

This is the task which Mr. Fergusson has undertaken, and there is no man more fitted for the purpose; in fact, there is no other man who has had the necessary education to enable him to produce such a work. We have men deep in classical architecture; there are plenty who know all about Gothic; Byzantine has numerous students; ancient Egyptian is well known; but the trans-Indus architecture has been studied by few, and these few would all point to Mr. Fergusson as being the man with the greatest amount of knowledge, and as having done more than any other to work out the subject. He spent a great many years in India, during which his leisure was devoted to visiting and drawing—drawing being the best of all means for studying this subject—all the important architectural remains of that country. By this means he made himself master of the various styles, and all their details, so that he has been able to classify them, and this classification includes as many orders as the "five" of the last generation. It is this complete knowledge of oriental architecture, coupled with an equally extended acquaintance with that of the Western world, which makes him the man fitted to write "A History of Architecture in all Countries." All previous works which pretended to this title were written by men who had studied only some particular style which formed the *pièce de resistance* in their book, and the rest of the subject was served up as corner dishes, perhaps a mere fragment being made to represent the art of a vast geographical space, which we now find to be covered with examples of the highest value. But the present work goes on a different idea; which Mr. Fergusson thus expresses in his preface:—

"It is, so far as I know, the first attempt to write a universal history of architecture in which each style shall occupy exactly that amount of space which the extent of its buildings or their merit would appear to justify."

Let us now consider how the accomplished author has carried out his programme. Of course such a work cannot exhaust each style—it does not pretend to do so,—but with these volumes you can sit at home, and turning over their ample leaves, each illustrated by beautifully minute woodcuts, you may wander over the world and, like a traveller, visit all its buildings of celebrity. You may explore the interior of the Great Pyramid, and understand its construction as well as if you were on the spot. You may ascend the Nile, and visit Thebes and its temples. Jerusalem and the Holy Places are an easy pilgrimage. The Acropolis can be scaled, and the Parthenon measured; St. Sophia can be looked at without the usual demand for "bucksheesh." You may peep into the Caves of Inkerman, and pay a flying visit to Moscow; a few pages turned over, and you are at Bagdad looking at the tomb of Ezekiel. The Birs Nimroud—the now accepted Tower of Babel—is ready for inspection, and so your enthusiastic guide leads you to India, with its wonderful rock-cut temples, and the elaborate and beautiful ornamental shrines which are to be found in every part of it. Now, on to Siam, and you have the beautiful temples which Mouhot, the French naturalist, was the first to discover, in his search after the wonders of insect life, through the jungles of that country. At the last meeting of the British Association Mr. Thomson exhibited the plans and numerous photographs of the Great temple of Nakhon Wat—one of those which Mouhot first came upon—and these are in part reproduced on Mr. Fergusson's pages, so that the reader may form an idea of this wonderful remnant of ancient architecture. After looking in at the Great Temple of the Dragon at Pekin, an easy jump takes you over the Pacific, to Mexico and Peru, and their very strange Sun Temples, some of which are like Egyptian pyramids, and others with strong Buddhist analogies about them, leading to the idea of a connection between the old and new world, which Mr. Fergusson thinks may have existed

by way of China, and possibly through Behring's Straits in the fifth century.

In making this round of the globe, visiting "all countries" where there are remains of buildings, you will find that your cicerone is not a dull, dry matter-of-fact architect, knowing nothing but the knowledge which is peculiar to his hobby. On the contrary, the architecture of each country is treated in relation to the race of people, and to the requirements of their religion or life. In the preface, the author claims that if he were to state the most important feature of his work, it would be its "Ethnography." He says :—

"My impression is that, unless the essential affinities of styles are perceived, and their application can be traced, the history of architecture is a mere *memoria technica* for connecting buildings together; but whenever their true relations are grasped, their history rises to the dignity of a science. My conviction is, that when properly appreciated, architecture will be considered as important in tracing the affinities of races as language; and that, in many cases, it is even more so, because more fixed and more easily read, while it is quite as essentially characteristic. So deeply impressed am I with the importance of this element, not only to the art of architecture, but to the science of mankind, that I feel that if I have been enabled to place it in a clear and intelligible form, I shall not have lived or laboured in vain."

Probably there are few who are prepared for such claims on the part of architecture. The most of people generally think that buildings are produced *anyhow*, or, if there is a style about different periods of architecture, that it is very general and vague, and not at all to be depended upon. But it is a great and important principle that there are not more reliable records in history than the buildings of a country. The manner in which men have built houses, temples, and tombs, the material of construction, the ornaments and sculptural decoration, are in every land among the most trustworthy arguments which history can produce. They are the fossils of their several periods. Inscriptions may be interpolations of a later date, or written falsehoods of the time; books are generally the written records of a man, or expound the views of some set of men at a given moment. This architecture never is. So far as it goes, as a record, it must express the truth regarding the ideas, the wants, and aspirations of an epoch. The details of a building, its arrangement of parts, its mouldings and its ornaments are as certain data as is the structure of plants in botanical classification.

No better illustration of the foregoing proposition could be given than the discoveries which Mr. Fergusson made about Jerusalem. There was a building there called the Holy Sepulchre, and there was another called the Mosque of Omar. When Mr. Fergusson began to consider the character of these buildings, he was struck with the pretended name of the "Mosque of Omar," and his knowledge of oriental architecture at once told him that no Mahomedan ever raised it for a mosque. A more minute investigation established the fact, that it could not have been built before the time of Diocletian, and not later than that of Justinian. Intermediate came the reign of Constantine, and it was known that Constantine had built a House of Prayer, which he commanded "should be erected round the Saviour's tomb on a scale of rich and lavish magnificence, which should surpass all others in beauty; and that the details of the building should be such that the finest structure in any city of any empire might be excelled by it." Such were Constantine's orders, and no building in Jerusalem except the Dome of the Rock realizes them. It is one of the finest examples of richness and lavish magnificence in the world, and it is from its detail of ornament and construction, a building of the age of Constantine. Here on this architectural stronghold Mr. Fergusson takes his stand. Eusebius and other historians have been brought into the controversy. Old monks and pilgrims who have left writings in early days have been appealed to; and all these historical and written data have been quoted on each side, with that air of triumph which indicates that they are authorities confirming the most opposite opinions; but in the midst of this long and heated controversy, with so much uncertainty about the meaning of historical documents, the architectural facts and the argument founded upon them stand untouched, and by *these written stones* it has come to pass that a man understanding the *writing*, has been able to overthrow an error believed in for ages; to make clear what the regular sources of history had failed to do; and thus to establish the value of architecture as a study in relation to the "science of mankind."

Mr. Fergusson intended to give a greater importance to the Druidical remains than he has done, and he was at the trouble of a journey to Carnac in Brittany, to see the wonderful monuments there. The questions involved made it evident that justice could not be done without going beyond the purpose of the present work; thus the matter is left within the limits due to its importance, and the author awaits some other opportunity to give full justice to the architecture of the Druids.

There is one very interesting chapter on the ancient Celtic architecture of Ireland. The author seems to think that the style did not come by way of England from Europe, but that its origin must be sought in the East, and that it must have reached Ireland by some very early and independent source. This is in keeping with the traditions of the country, and also with the fact that when Augustino arrived from Rome, he found that Christianity had got to our islands before him. How it came is one of the dark points in our primitive history: but the generally received idea is, that it was by way of Ireland that Columba carried it over to Iona, and that it thence spread all over Scotland, and as far south as York. It was in virtue of this pre-conversion that York so long contended for the Primacy of England against the claims of Canterbury.

The principal interest is, of course, in the two first volumes, which treat of the ancient architecture of the world. The third and concluding volume begins with the Renaissance as the commencement of modern architecture, and from that point the subject is brought down to the present day.

The quantity and quality of the woodcut illustrations cannot be too highly praised: of this our readers may judge for themselves, for, through the kindness of the publisher, we are enabled to give a couple of the drawings which add so much interest to Mr. Fergusson's pages. One is "the great Tower of the Pagoda Wat-Ching, at Bangkok;" and the other is a "View of Exterior Corridor, Nakhon Wat." The last of these was quite a discovery on the part of Mouhot, and so great was the interest felt in it, that an amateur photographer—Mr. J. Thomson—penetrated into the jungle, and has brought home a most complete set of photographs of this vast and wonderful temple. These photographs produced quite a sensation at the last British Association's meeting, for the style of architecture can scarcely be identified with any other in the East. The square pillars of the corridor in the illustration seem more allied to the Erectheum than to any Indian building. The temple, although Buddhist, has the story of the Ramayana sculptured all along its corridors, a circumstance which indicates the existence of Hindoo ideas in this part of the world at a very early date.

We must acknowledge our thanks to Mr. Murray for having placed it in our power to furnish our readers with two such beautiful illustrations of these last and most important discoveries in ancient architecture.

Hours of Work and Play. By Frances Power Cobbe. London: N. Trübner & Co., 1867.

Of the fourteen papers composing this book, twelve are reprints from high-class magazines, whose pages they have adorned during the last three years. Any eulogy of ours upon Work of the worthiest and Play of the most sparkling order, which originally found favour with the conductors, and doubtless with the myriad readers of such periodicals as *Macmillan*, *Fraser*, *Temple Bar*, *Once a Week*, or *The Atlantic Monthly*, may seem somewhat after date; but we will nevertheless congratulate Miss Cobbe on the popularity

she will acquire through this republication. The authoress of "Public Morality and its Teachers," "The Indigent Class," "The Fallacies of Memory," "The Shadow of Death," "A Lady's Adventure in the Great Pyramid," and "The Fenian Idea," has fairly won new laurels for her sex in an arena, where its triumphs have of late years been many and signal. In extracting specimens of her grave and gayer moods, we face a certain small risk of being blamed for serving up *rechauffées;* but the majority of our readers will, we are sure, thank us for the following quotation from a delightful essay on "The Fallacy of Memory," to recognize which they must have read the New York *Galaxy* of May last.

"The conclusions to which this brief review of the failures and weaknesses of memory must lead us are undoubtedly painful. To be deceived a hundred times, and misled even in important matters, by a wrong estimate of our powers, seems less sad than to be compelled to admit that the powers themselves are untrustworthy. 'To be weak is to be miserable,' in this as in all other things; but to find Memory weak is to be not only feeble in the present, but to lose our grasp of the past. That dear past! the past by whose grave we are standing all our later life, is doubly lost to us if we must cover it up in dust and oblivion. To know that what we deem we recall so vividly is but a poor, shifting reflex—hardly of the thing itself, only of our earlier remembrance of the thing—this is sad and mournful. Almost more terrible it seems to confess the fallaciousness of the great traditions of History, and in the waste of waters, over which we are drifting, to behold the barks of past centuries no longer stretching their sails in our wake, but growing hazy and spectral in the mist of doubt, till some we deemed the richest galleons in that mighty fleet fade from our eyes, and are lost for ever in impenetrable cloud. These things cannot be evaded or averted. On our generation of mankind has come the knowledge of an isolation, such as younger races never felt, and perhaps could less have borne. The sweet, childlike companionship with Nature, the reasoning beasts and birds, the half-human fauns and dryads and nymphs and river gods, the gnomes and sylphs and fairies; the peopled sky of angels, and nether world of demons and of ghosts—all are gone from us. We are alone, we of this poor human race, so far as we have any knowledge or even definite fancy, among intelligent beings. Between us and our dumb brute slaves there is a gulf, which no longer is bridged over by any earth-born or heaven-descended race. Science, as she marches round us in wider and yet wider circles, leaves ever a hard and barren track behind her, on which no flower of fancy may bloom again. And at this hour she tells, or threatens to tell us yet more—that if we would know the parents from whom we came, whose Paradise-home yet seems the cradle of our infancy, we must retrace the world's course not for six thousand years, but for ages of millenniums, and find them at last—not beautiful and calm, conversing in Eden with the sons of God—but simious-browed and dwarf of limb, struggling with the mammoth and the cave-bear in the howling wilderness of an uncultured world. Is not this enough? Must we also relinquish those Elysian fields of History, where the great departed yet seemed to live in bowers of amaranth and never-fading fame? Keeping the landmarks of the ages—the wars and the dynasties; keeping the great heirlooms of wisdom, in books, in art, in temple and picture and poem and statue, must we relinquish those thousand lesser marks which have served to render History real and dear to us, and have brought the mighty Dead, not as silent ghosts and faintly-descried shades, but as living and speaking men before us? Must we be content to know, that only the outlines of the ancestral pictures of our house are true, and all the colours which make them beautiful, retouched and falsified? Perchance it must be so. Perchance the loneliness of human nature must needs be more impressed on us as science advances in the field of historical criticism, as in the fields of mythology and physiology. The past is becoming like a twilight scene in a mountain land, where the valleys are all filled with mist, and wood and waterfall and village spire are dimly shadowed. Only some snowy Alp, whose huge outline we recognize, towers into the upper air; while the lights gleam here and there, from hearth and cloister and student's cell, the rays of genius shining through the night of time. We are a thousand millions of men and women and babes living now upon earth; but of those who are gone before on whose dust we tread; and of those who may be dwelling now in the stars which glitter in our wintry sky, we know almost as much,—and that is not knowledge, but conjecture."

We cannot here find room to quote very pathetic passages we had marked in "The Diablerêts," piquant comicality from "The Lady's Adventure in the Great Pyramid," or elegant satire from "The Humour of all Nations." Suffice it for us to say that these sparkling pages prove their authoress to possess a depth of feeling, a keenness of observation, a store of knowledge, and a polished style, which place her, and will maintain her, if she so please, in the foremost rank of modern essayists.

Papers on Picture Playing at the National Gallery. By an Artist. Trübner & Co., 1867.

THE titles of this series of essays, "Annibale Caracci," "Bravo Boxall!" "Salvator Rosa," "The Academician on Time and Dirt," "The Dealer on Toning down," "The Connoisseur on Process," "The Philosopher on Effect," "The Committee and the Job" will afford an intelligent reader a notion of the tenor and spirit of the pamphlet they compose. Those who can relish a hearty diatribe may wile away an hour or two very pleasantly over the "Artist's" pages, which, while they teem with abuse, in good set phrase, of the powers that be, and suggest to an unprejudiced mind the idea of a hobby-horse run wild, yet evince a considerable acquaintance with the subject, an honest abomination of jobbery, and a deep and fervid love of art that goes a long long way to palliate excesses of expression. In the course of the last autumn several important pictures in the National Gallery were subjected, under the direction of Mr. Boxall, Mr. Woruum, and other *employés*, to a very ordinary process of cleaning, and, as those authorities fondly imagined, with very excellent results. The principal ones were a Salvator Rosa landscape, commonly called "Mercury and the Dishonest Woodman," formerly the property of Mr. Byng, and "The Château of Stein," the largest landscape ever painted, by Rubens. When the Gallery was opened after the recess, we were there, and so it is to be presumed was the author of the pages before us; but oh! in what different moods. While we, in Bœotian blissful ignorance, were applauding what we were pleased to think the successful exertions of the authorities to unveil the long-obscured beauties in their charge, there was present one, to whom (pictorially speaking) a cleaner is a nightmare, and dirt a religion; and who muttering mentally, we may imagine, such phrases as "desecration! mutilation! spasm of destructiveness! Vandalism! noodles! nincompoops!" straightway returned home to give vent to his feelings in a protest, and a series of essays which are very instructive and interesting even to those who like ourselves differ *toto cœlo* with the main proposition he seeks to establish.

On the subject of picture-cleaning he opens his ease as follows: we extract the passage at some length, for though many of our readers have heard of the practice, its attendant risks, and of the controversy which rages periodically about the propriety or wrongfulness of it, few may be aware upon what the question hinges.

"On a picture that has been painted for centuries dirt to some extent must inevitably adhere; but this, if the work has not been ignorantly covered with bad varnish or oil, will be so small in quantity as not to materially interfere either with the effect of the work or the pleasure and profit derivable from it by spectator or student. Still, the removal of this dirt would unquestionably be a gain, provided it were done without damage to the paint; but 'cleaners' almost always take off, with the dirt, that delicate coat of colour by which the great painters imparted finish to their works, termed 'glazing.' Their process of painting was

broadly this: on a ground more or less dark and transparent they modelled the picture in tints formed by mixing white lead with coloured pigments, thus producing an effect which, as compared with their ultimate intention, was crude, cold, opaque, and technically speaking, 'dead coloured.' To this pale preparation they imparted life, warmth, harmony, and richness of tone by repeated coats or 'glazings' of colours more or less transparent; and a picture thus produced has the additional and invaluable quality of luminousness, resulting from light and opaque tints shining through colour rich but thin. Now it must be evident that pictures produced by this complex process can be injured at will. Let the owner or curator consider lightness or paleness a merit, and the glazings are at once torn off as 'dirt.'"

Our author next proceeds to indict the late and present keepers of the National Gallery, their aiders, abettors, and accomplices of every degree; for that they, under pretence of removing the accumulated filth of ages (which in a second count he charges that they themselves imposed in the shape of varnish), did skin, flay, and destroy no less than one picture per annum since 1843, and thus inflicted wanton devastation upon taste and art.

The following peroration rather reminds us in style and solemnity of the celebrated one of Burke against the unfortunate Governor-General Hastings. Perhaps it is more than adequate to the occasion that has evoked it, but we quote it as a specimen of the intensity of party.

"Against this Vandalism we raise our voice—against this ignorant destruction of works which can never be replaced we protest in the interests of art, of the nation, and of the world. As Mr. Boxall—in contempt of the overwhelming evidence against the National Gallery process of 'cleaning,' given before the Committee of 1853, in contempt of the facts then deposed to by Mr. Morris Moore, Mr. William Coningham, Sir David Brewster, Mr. David Roberts, R.A., and other competent witnesses, with reference to the nature of 'glaze' and the irreparable injury caused by its ignorant removal—in contempt of the universal condemnation of the Vandalism of 1852, by the press—has thought fit to recommence this method of destruction, thereby not only depreciating the value of public property to the extent of thousands of pounds, but causing injury which no money can repair—we demand in the name of the public, that all operations that come under the head of 'cleaning' be at once stayed, and that no more pictures be removed from public sight until Parliamentary inquiry has again probed this matter to the root."

We devoutly hope that the accomplished author may be disappointed of a Parliamentry committee, which would be utterly abortive, because, as neither committees nor individuals can elucidate the composition and nature of the glazing of any yet 'unflayed' picture, or find out the appearance which any one painting presented when it left the easel of the master, it would seem to us that no reference can settle how much paint or glaze, if any, has been or will be taken from any picture in the cleaning process, along with the hallowed, harmonizing dust which the indecisive Eastlake is censured by our author for approving, but for which all these pages are a plea. No one invariable rule could be laid down on the subject save that dirt should be immovcable; and in denying that the operations on the Rubens and the Salvator would justify such a rule, we differ, with regret, from the Artist.

We have pleasure in extracting his agreeable commentary on the former work, not suppressing the castigation levelled at ourselves and all the other noodles of the world at its close:—

"This noble landscape represents, not sunset (for this effect see smaller landscape by Rubens, No. 157), but a sultry autumnal sunrise. To the left is seen the château (still, we believe, standing) sheltered by tall trees with rich October tinge of leaf. On the terrace, taking the morning air, stroll Rubens and his wife; whilst the lazy maid, holding their infant child, sits indiscreetly down. A moat surrounds the place, and, leaning over its bridge, a rod, with customary adjuncts of 'fool' and 'worm' (see Johnson), trusts to provide fish for dinner; whilst, thinking of the same meal, a man, crouching in the foreground, with dog and gun, has designs on a covey of unconscious partridges. Far into the dim distance stretch rich level meadows, fenced with pollard and stream; whilst in mead nigh at hand stand cows relieved by milkmaids—one still busy, the other bending her steps towards home. To the left, starting for market, with brisk but heavy trot, two horses draw a 'lumbering' wain, in which is seen a bonny, smiling, buxom Flemish dame, in hat, red cloak, and gown of blue; whilst a huge brass pitcher of warm milk, a barrel of portly size (sad sight to temperance eye), and unlucky red calf, trussed in bucolic style, all four feet together, bear her company. Guiding the team sits, postilion fashion, on near horse, a happy peasant, who turns the vehicle, at the moment caught by Rubens, into a shallow, brown, brawling brook, the disturbed waters of which flash with golden sparkles to the horses' tread. Briars and tall weeds, wonderfully touched, sprawl over trunk and bank, and fill the foreground; whilst, perched in a bush to the extreme right, is an assembly of early birds, varied in kind, and deep in after-breakfast debate as to the influence of soil on the flavour of worms; but a kingfisher, disdaining such small talk and disgusted at impertinent proximity of biped with gun, takes wing for fresh streams and gudgeons new. Such, in brief, is something like the story told by this wonderful delineation of seventeenth century rural Flemish life, which, modelled in Rubens's customary manner on a transparent ground of lightish yellow hue, was finished, tone and form, with free use of transparent colour, now ruthlessly torn away; and although the uneducated eye, unequal to discrimination of Rubens's handiwork from 'cleaners'' brown or *toned* varnish (of which more anon), may think the picture 'renovated,' the connoisseur, gifted with clear vision by years of study of art and nature, too, in all their forms and moods, knows that it has been converted into so irreparable a wreck, that the great Rubens, could he see it, would be filled with unquenchable disgust, and would overwhelm with indignant reproach the 'noodles and the nincompoops' through whose dense ignorance so gross a desecration has been permitted—nay, more wonderful still, superintended."

Now, to whom do we—and perhaps even the artist-author—owe our thanks that we can follow, relish, and confirm the foregoing interpretation? To the well-abused cleaner, the reverent, competent "flayer" who has exhumed for the painter, the poet, and the public a thousand beauties that have not been seen or dreamt of since the picture made its first appearance in the gallery. Had we any passion to bestow on the matter, we would as roundly as the "Artist" does, invoke the shade of the great Fleming to support our view of the case, and to offer thanks to those who have so late made his excellent work manifest among us. Truly no Parliamentary committee will reconcile such absurd optical difference as exists between us and our author.

For him there are evil times, perhaps, in store. No committee can deprive him of that exquisite feeling for colour which he shares with Mr. M. Moore, and a few others; a feeling as refined, and sensitive as the touch of the blind or the ear of a Beethoven. Yet it is by what he deems the uncultured hordes of Noodledom, that committees or governments may yet again be swayed, and picture after picture may be "flayed" at the bidding of "idiots" and "boors," who must see what they have paid for, because they cannot evolve it from their imaginations; while the few and fatally endowed connoisseurs weep outside in sympathy with each wounded glazing. Let us hope that consideration for those who have not that inner sense which can appreciate the beautiful through primary, secondary, and tertiary formations of dirt, may in time allay the irritation of the sensitive artist, and that he may make a little more allowance than he now seems disposed to do for the views and actions of those who do not walk with him. It is not necessary for a person to be a noodle, or a nincompoop, or a jobber, or a rogue, because he happens to be a public official, or happens not to be a professional connoisseur.

NATURE AND ART

May 1, 1867.]

THE HARMONY BETWEEN THE MOSAIC AND EGYPTIAN COSMOGONIES.

The Substance of a Lecture delivered at a Meeting of the Syro-Egyptian Society, on the 14th of February.

By Joseph Bonomi, F.R.A.S.

WHATEVER may be the opinions now permitted at the Vatican respecting the Copernican system, it is presumed that there is no Oxford or Cambridge Doctor of Divinity who, in this latter half of the nineteenth century, believes that the truth of Scripture is in the least affected by the discovery of the earth's motion, for the very sufficient reason that the Bible was not designed to teach mankind astronomy. So likewise, for the same excellent reason, if it should be proved satisfactorily that the accompanying Egyptian diagram of the constitution of the universe is in perfect harmony with certain statements in the Bible on the same subject, however much both may be at variance with modern science, the truth of Scripture will not be assailed or injuriously affected by it; on the contrary, it is hoped that the monument from which the diagram is derived may come to be regarded not only as a most ancient and valuable comment on those particular statements, but also as a corroboration of that Scripture which declares that "Moses was learned in all the wisdom of the Egyptians."

The ancient document from which the diagram (Fig. 1) is taken is the alabaster sarcophagus in the Museum of Sir John Soane. As some of my readers may not be acquainted with that important piece of antiquity, I will digress so far as to say that it was discovered about fifty years ago by Belzoni, in the tomb of a Pharaoh who reigned, according to Mr. Samuel Sharpe, about 1,200 years before our era; that it is carved out of a single block of a semi-transparent marble, of the same kind and from the same place as the alabaster box spoken of in the Gospels; and that it is a large chest in the shape of a mummy, sculptured inside and out with significant figures and hieroglyphical writings, setting forth the notions entertained by the most learned people of antiquity respecting the constitution of the universe, the origin and conquest of evil, and the future destiny of the soul. These three subjects of stirring interest must have occupied the minds of the thoughtful and the intelligent in all countries and at all times. That they did do so more profoundly in ancient Egypt than elsewhere, the monuments abundantly testify, there being scarcely a single object, from the largest temple to the smallest article of domestic utility, without its inscription, more or less bearing reference to one or other of them.

I will now proceed to explain how the diagram (Fig. 1) is a picture of the universe as understood by the ancient Egyptians, and how it is in accordance with certain statements in the Bible on the same subject.

I must first, however, draw attention to its position, which is at the head, inside of the sarcophagus. It is important to notice this circumstance, because, by placing this subject at the head, the ancient designer of the work meant it to be understood that it should take precedence of every other subject; in fact, that it should be, as its place declares it to be, the "*berashith*," "the beginning," or, as this first word in the Bible might be more closely translated for our purpose, at "the heading," ראש signifying "head."

All persons in the least familiar with Egyptian representations know that the zigzag lines represent water. It is to be observed that, in the midst of the expanse of water (A A A A), is a plain part (B), unoccupied by zigzag lines. I shall hope to convince the reader that the ancient Egyptian artist meant this plain part to represent the firmament, which is stated in Genesis to be "in the midst of the waters."

Above this plain part, as the picture now stands, is the figure of a man curiously convolved. This figure (C) represents the earth. He is curled up in this remarkable position to convey the idea of the circular figure of the earth,—not, however, as a ball, but as a disc, fixed like an island in the ocean or surrounded by the sea. Thus the earth was con-

ceived to be by all the ancient world; and so, in Psalm xxiv., it is said to be "founded on the seas and established on the floods;" and (in Psalm cxxxvi. 6) "To him that stretched out the earth above the waters." Other quotations, both from the Bible and Apocrypha, might be made, all tending to convey, respecting the earth, the idea set forth in this ancient document.

In further confirmation of this notion of the earth, namely, as being surrounded by water, I will refer to a map of the world as known to the Israelites before the time of Solomon (Fig. 2). It is enlarged from a woodcut in a little book called "Texts from the Holy Bible Explained."*

The Garden of Eden is represented at the sources of the Tigris and Euphrates. Josephus (Ant. i. 13) considers the Gihon as the Nile, and the Pison as the Ganges; and Virgil (Geor. iv. 288) makes the Nile rise in India, as if it were the same as the Ganges. Thus, says the author, the ancients thought that the Gihon flowed round the western half of the world into one branch of the Nile, and the Pison flowed round the eastern half, through the Ganges, into the other branch of the Nile. It was not before the reign of Darius that it was discovered that the Persian Gulf was joined by water to the Red Sea, or that there was any ocean to separate the Ganges from the Nile. That the earth was believed to be circular we learn from Isaiah.† That this circle was thought to be bounded by water we learn from Job.‡ Homer called this boundary-water the river Oceanus (Odyssey, xi. 638). In the map, Jerusalem would be supposed—though this is not indicated—to stand very nearly in the middle of this circular earth, and Ezekiel (xxxviii. 12) describes his nation as dwelling in the very middle spot of the earth.§ I recollect being shown by a Greek priest a stone in the Greek Church of the Holy Sepulchre, as marking the very centre point of the earth.

To be quite sure, however, that the ancient designer of the diagram (Fig. 1) meant the curved figure to represent the earth, we will turn the picture and view it from the opposite side.

As it is now placed, a little figure of a woman (D) will be perceived standing on the head of the convolved figure; that is to say, in this pictorial language, standing on the top or highest point of the earth, and holding up the sun (E), and as we now view the picture, holding up the sun *above* the earth, in that plain part, which thus acquires an additional claim to be considered the firmament, and at the same time certifies the intention of the artist respecting the meaning of the convolved figure. That the ancient contriver of this picture of the universe intended it should be contemplated from the present point of view is rendered perfectly certain, because the hieroglyphics accompanying the two figures can only be read in this position. Moreover, that we should not be mistaken as to the quality of the person who holds up the sun above the earth, the ancient scribe has written her name Neith or Netpe in front of her. The name is composed of the first three hieroglyphics,—the vase, which is an N; the half-circle, which is a T; and the horizontal bar with a pointed deflection at each end, which is a P. This last sign is an emblem of the heavens, and may be taken as a determinative; that is to say, as determining the quality of the thing named, as Neith, the heavens. We find both the first and last characters of this goddess's name amplified in the hieroglyphics over the head of the large figure engraved on the floor of the sarcophagus. (See Plate 16 of "The Alabaster Sarcophagus of Oimenepthah I.," now in Sir John Soane's Museum, Lincoln's-Inn Fields. Longman, Green, & Longman: London, 1864.) There she is in the act of spreading her arms to receive the body of the king, which was deposited in the coffin. More usually, however, this goddess is in the attitude of stretching over the earth, as in the cover of the Hartwell sarcophagus;* in the zodiac on the ceiling of the temple of Edfu and other temples; and in that stone sarcophagus in the British Museum, where she is represented likewise as mother of the planets. Here, however, she is in the character of sustainer of the sun in the firmament.

Within the contour of the figure representing the earth the first two hieroglyphics—viz., the seat and the eye—are those which stand for Osiris. The rest of the sentence intimates that from this place the spirits—that is to say, the souls—of the human race depart and return; in allusion, probably, to the doctrine of the Metempsychosis, which is illustrated in another part of this interesting monument.

And now, to contemplate the rest of the diagram, we must restore it to its former position. The presence of the deities here figured in the boat I take to be good circumstantial evidence that the plain part in the midst of the waters was meant for the firmament, and that is, because the artist has represented the gods as dwelling and moving therein. These figures and the scarabæus in this part of the diagram refer particularly to an Egyptian dogma respecting the soul, and bear no further reference than that just stated to the subject under consideration.

Now, as the picture stands, from the base rises the upper part of the figure of a man (F), gigantic as compared with the other figures. He is extending his wide-spread arms to sustain the sacred papyrus boat of the gods in the firmament. The Greeks

* "Texts from the Holy Bible Explained by the Help of the Ancient Monuments." By Samuel Sharpe. Day & Son, Limited. 1866.

† Isaiah xl. 22: "It is he that sitteth upon the circle of the earth."

‡ Job xxvi. 10: "He hath compassed the waters with bounds, until the day and night come to an end." Otherwise, literally rendered, "He drew the circle on the face of the waters, as a boundary between light and darkness."

§ At Delhi there is a high iron pillar of great antiquity, which is believed to be the centre of the earth; and this iron column is considered the spindle upon which it turns. Delhi si Dilhi, from *dil*, the heart or centre.

* "The Triple Mummy-Case of Aroeri Ao." London: Longman, Brown, Green, & Longmans. 1858.

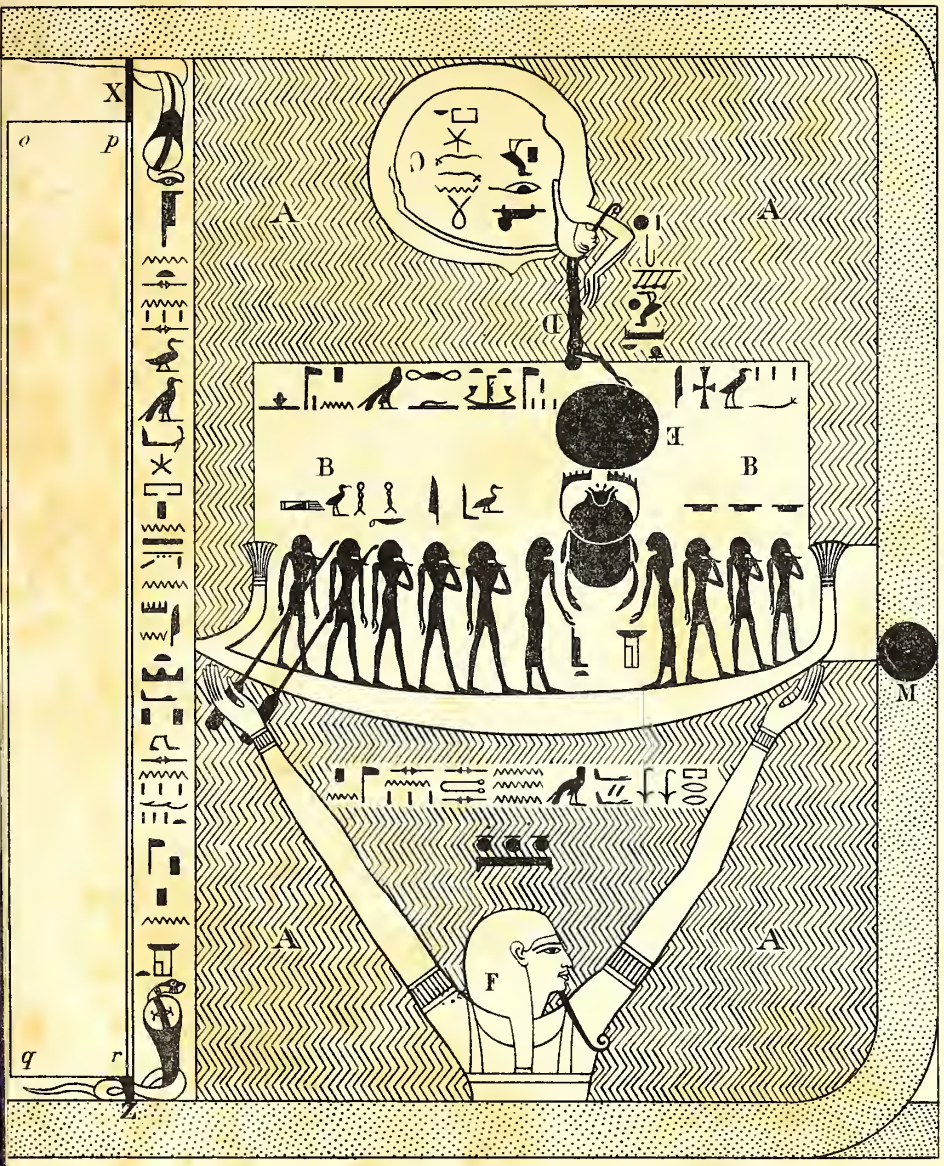


Fig. 1.

Fig. 4.

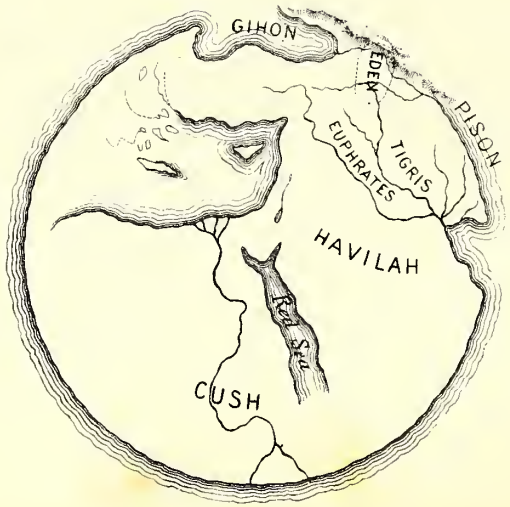


Fig. 2.

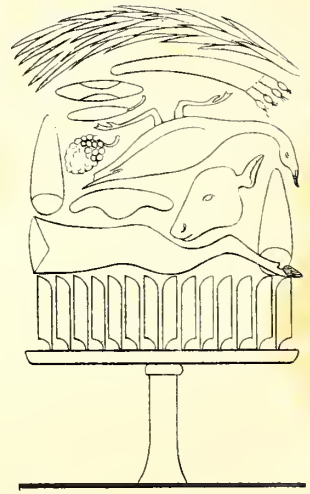


Fig. 3.

and Romans represented the gods in chariots; but as in Egypt the Nile is the principal highway of the country, the Egyptians depicted them in a boat. This gigantic figure is a personification of the great ocean that was supposed to sustain the firmament and all things therein, and it is remarkable how closely it corresponds to a metaphorical sentence in Habakkuk: "The deep uttered his voice, and lifted up his hands on high." There is no representation in all Egypt, no sarcophagus in any museum of Europe, and no papyrus in the British Museum, as far as I am aware, that will bear the interpretation which you have just heard attributed to this diagram.

And now, if it were required to reduce to lines, or, in other words, to present to the mind through the medium of the eye, that remarkable statement in Genesis respecting the position of the firmament, namely, "in the midst of the waters," and to render pictorially in one and the same view that other statement in the Psalms respecting the earth as "founded upon the seas and established upon the floods," I am at a loss to conceive how it could be better done than it has been by the ancient Egyptian artist. To do this the more effectually, he has employed both plan and elevation in the same picture in a way common to Egyptian representations, and no doubt universally intelligible at the time and in the country, where this pictorial language is, as it were, the very root of the more ordinary written one.

For instance, when it was required to explain to the spectator that the food offered to the dead was properly set out, according to custom, on tables spread with the fresh green leaves of a particular species of reed, it was done as represented in Fig. 3. The leaves are to be regarded as lying flat on the table, and on the top of them each particular article of food is shown by a means which could not have been accomplished, in one view, in a true optical representation. Again, if it were required to show that palm branches were strewn in the path of the mourners, it was done in the way described in Fig. 4. So in the diagram (Fig. 1), to explain that the figure of Osiris is put for the earth, the goddess Netpe, or the heavens, is represented in elevation as standing on the head of Osiris, who is "in plan." In other words, she is standing on the highest part of the earth, to sustain the sun; and because it was necessary to place the sun in the firmament, and *above* the earth, it was of course essential to show that the picture must be viewed from another base; and hence the figures of Netpe and of Osiris are reversed, and the hieroglyphics belonging to these figures are made to be read from the same point of view. Again, for a like reason, because it was necessary to show that the firmament and all it contained was supported by the great ocean of space, the gigantic figure personifying this vast sea was necessarily placed at the proper base of the picture. It now remains to show in this same picture the firmament under another aspect.

The Egyptian artist has chosen to do this by a band of dots, which in this form could be made to serve as the upper and lower boundaries to the subjects treated of in this most interesting document, and, at the same time, to convey to the mind something solid and strong, such as granite, which is typified by the dots he has so industriously engraved in every part of it. In other words, he would have you to understand that, although metaphorically or poetically speaking, it might be said that the sun was sustained in the firmament by the queen of heaven, as this Egyptian goddess is called in Jeremiah xliv. 25,* yet, in prosaic truth, it was fixed in something firm and hard, like the granite boundaries of his own country. The two leading ideas present in the mind of the author of the Book of Job, when he compared the sky to a molten mirror,† are precisely those which are embodied in this diagram; for the strength and solidity of the bronze are here expressed by the presence of a dotted granite border, that holds and binds all space together, and the absence of dots in the firmament (B) favours the idea of light and expansiveness conveyed by the polished and reflecting surface of the mirror.

Just where this band of dots (the second aspect of the firmament) is joined to the former, in the midst of the waters, the artist has again placed the sun (M), represented as setting or sinking, below the surface of the waters, *as signified by the horizontal line which joins it to the boat.* If you will now travel in this "path of the sun," as it has been very happily designated by Mr. Sharpe, in the letterpress to the "Sarcophagus of Oimenepthah," you will arrive at a door or gate (*o*, *p*, *q*, *r*), which forms the left-hand boundary of this picture of the universe.

At the upper pivot (X) of this gate is the figure of a cobra serpent, to personate Isis (as the hieroglyphics inform us). She presides over the upper pivot in the upper firmament, while at the lower end of the gate is another cobra serpent, put for Nephthys, who presides over the lower pivot (Z) inserted into the lower firmament.

It may not be unworthy of remark, in proof of the intelligent thought displayed in even the smallest particular, and the painstaking execution of this remarkable work, that the upper pivots of all these gates are represented as cylindrical, while the lower pivots are conical, as they were and are to this day in all the gates and doors of the city of Cairo. The lower pivot is conical, because of the pressure of the gate and consequent tendency to sink; the upper pivot, having no such tendency, is cylindrical.

This great door, then, whose pivots are fixed in the upper and lower firmaments, I venture to say is alluded to in the Book of Job (xxxviii. 8) as one of the mysteries of creation, and, as we may infer from this ancient document and from the form of question in which the words are addressed to the

* "We will surely perform our vows that we have vowed, to burn incense to the queen of heaven."

† Job xxxvii.: "Hast thou with him spread out the sky, which is strong, and as a molten looking-glass?"

Patriarch by the Almighty himself, is to be revealed in the after-life of the tomb. The words are, "Or who shut up the sea with doors?"

Now, on looking over the plates in the book of the Sarcophagus, we find that similar gates separate the chambers of Amenti or Hades: these gates are also alluded to in the same chapter of the Book of Job (xxxviii. 17), and likewise in the form of question, "Have the gates of death been opened unto thee? or hast thou seen the doors of the shadow of death?" The pivots of these gates are fixed in the same band of dots, again intimating firmness and solidity of substance, in which light those seventy learned men who translated the Hebrew Scriptures in Alexandria, most certainly regarded the word רקיע, which we, from the Latin, render by the word firmament, as bearing the same meaning. So, likewise, in the second century of our era, was the firmament regarded by the astronomer Ptolemy, whose system, as I learn from a recent translation of Dante by Mr. Pollock, was adopted by that celebrated poet. By both astronomer and poet the sun and planets were supposed to move round the earth in solid crystal spheres, an idea which finds some support in a passage in Ezekiel (i. 22), and which now we see was likewise entertained by the ancient Egyptian contriver of this illustration.

With the band of dots which forms the right-hand boundary of the diagram terminates the material world, and the first chapter in this most interesting monument.

In conclusion, it is curious to remark with what a religious tenacity these old notions of the structure of the universe were maintained. The Ptolemaic system, which, as we see, was mainly derived from these more ancient Egyptian ideas, became so universally established and religiously maintained, that even one hundred years after the publication of the Copernican system, which asserts the movement of the earth, the amiable and excellent man Galileo was persecuted for demonstrating its truth till the day of his death, which took place in January, 1642, exactly one year before the birth of our celebrated countryman, Isaac Newton. So rapid has been the progress of science since the invention of the telescope and other appliances, that now, it may be said, every observatory in the world can furnish mathematical and ocular demonstration of the earth's motion.

ON SKETCHING FROM NATURE.

By Aaron Penley, Professor of Landscape Painting at the Royal Military Academy, Woolwich.

No. X. A SPUR OF BEN LOMOND.

THE few forms of which this subject is composed are much varied in respect of lines, every portion of them partaking of undulations, with the exception of the central spur of Ben Lomond and the several detached and fallen rocks by the water's brink. The serpentine outlines of the many divisions of grassy mounds seem to play into each other in easy and graceful contours, while at the same time they admit of considerable alternation of light, shade, and colour. Opposed to them are the perpendicular trees, which rise in some significant height before the background, and convey to it the idea of softened and hazy atmosphere. Their stems are all of different length, breadth, and inclination, thereby affording little chance of formality. The position of each stem at its junction with the ground will be found to bear the line of beauty, and help to show the several progressive stages of distance in their immediate locality. This point is seldom attended to with a proper degree of thought or care that it ought, although by a due observance of the varied lines of a foreground, the eye is led on step by step until it finds itself carried into the middle distance, and, receding still further, becomes lost in a far-off haze.

This mingling is often the result of well-disposed lines, growing, as it were, out of each other, and so skilfully intertwined that none but the artist could suppose the effect could proceed from such a primitive cause. It is nevertheless perfectly true that distance is frequently more the result of lines than of colour, although of course the latter must ever be the true interpreter of the former. The groups of trees at the end of the loch are also of different sizes and forms, but so managed as to carry out the flowing undulations in the composition of lines: this is obtained by having reference to the several heights, to which particular attention is called. The stones at the water's edge in the foreground are arranged somewhat in the form of an ellipse, and yet so varied in size and form as to preclude the possibility of such an impression. The angular shape of the central mountain is, by contrast to the curved lines below, made to rise up with increased grandeur, and is suggestive of bleak and rugged wildness. Its height is made more apparent from the trees by the water, over the stones, being placed immediately underneath the summit; thus giving its full dimension from the base. The dark or rather blue range of hills below, in front, assist by their continuity in giving a certain impressiveness to the one solid mass; while the outline of the distant mountain, so different in character, still adds to the precipitous and rocky steeps of the principal

object of interest. One particular more I would wish to be well noticed, and that is the form of the long soft cloud above the mountain. If it were of any other shape than it is, it would necessarily have attracted undue attention, whereas by its simple, though slightly broken horizontal line, both mountains have their peculiarities strongly and clearly developed. Thus far have I thought it necessary to speak of the manner in which the several lines of the picture are composed, and how these in their varieties obtain value the one from the other. It is from the want of study in this individual branch of the art that much real pleasure in the contemplation of Nature or of a picture is lost. The intention in the working out of the scene too frequently escapes general observers, who, as a rule, do not imagine for one moment that the principles of art run so deep as to call forth the most intense efforts of the mind before they can be presented in all their excellence, and convey a just and reasonable idea of Nature—of Nature under her many garbs —of Nature in her numberless and varied effects.

With regard to colour, a general warmth pervades the whole drawing, which is cheered by the line of small blue hills in the middle distance. This blue tint must not be too suddenly introduced, otherwise it would be *unharmonizing*, if I may use the term; but rather should it be insinuated upon the purply tone of which the general mass of shadow is composed. This blue tone is also carried into the lower and shadowed portions of the trees, and in a less cold degree upon the rocks. I have said less *cold* degree, which means that there should be a little *red* added (crimson lake). The presence of the white stone in the foreground is very necessary to give depth of tone to the other light portions of the drawing; indeed all high lights are of the greatest importance as well as all the deepest touches, because they form so many points of attraction, upon which the eye will be sure to rest.

In carrying the colouring of this subject to completion, the sky should receive the line of cloud with a soft yet decided edge, as this will give considerable space beyond the mountains. There are two tones of clouds at the top edge, being of YELLOW OCHRE and ROSE MADDER, and that about the mountains partaking of more ROSE MADDER and a very small portion of COBALT. These tints may be passed over the mountains. After they are dry, the broad shadows upon the mountains are to be washed on with a thin colour, made of COBALT and ROSE MADDER, carrying it under the blue tones; and while it is drying, it will be advisable to put on the horizontal tints upon the water with the same colour. The next thing to be done should be the more detailed shadows on the mountain, and afterwards the blue tones of the low line of hills, which should be of COBALT, a very little GAMBOGE, and CHINESE WHITE; the gamboge being to impart a slight green tone to the blue, and the Chinese white to give a little opacity in order that it may show more readily over the under tints. The warm citrine tints of the grass are of RAW SIENNA, mixed with ROSE MADDER in the redder parts, and a little COBALT where of a greener hue. All the trees in the middle distance are a modification of GAMBOGE, LAKE, and COBALT, and will require careful painting: their reflections are put in with the same. The foreground trees are to have the markings of the clusters of foliage distinctly put on with GAMBOGE, BURNT SIENNA, and INDIGO, the brush being held rather uprightly, and the colour imparted by lifting the hand at each touch from off the paper, for the purpose of causing the forms to show out with decision and crispness; for nothing ought to appear blurred or softened. When the whole of these forms are given satisfactorily, the intermediate spaces are to receive their washes, being careful to leave such lights as are requisite, otherwise there will not be any gradation. For the two yellowish trees, GAMBOGE, BURNT SIENNA, and INDIGO are to be employed, varying the quantity of each according to the proper tint. The centre tree is shaded with COBALT and LAKE over the first tint. A little COBALT and LAKE may also be put over the deepest shadows of the others, to impart a slight grey tone. In like manner the darkest touches are given upon the grass, and a few lines upon the water, keeping them horizontal. These are intended to represent the surface of the water.

It would be far more profitable to recommence this subject entirely, following out the directions given in the last number, and only having the former chromo-lithograph as a guide rather than making it the COPY. In adopting this method the learner will, in time, better comprehend how all finished water-colour drawings are begun and carried through to completion.

"STRAY SCRAPS FROM ODD LARDERS."

By W. B. LORD, Royal Artillery.

WHETHER roaming among the luxuriant forests of the Tropics, journeying through the frozen wastes of the Arctic Regions, the arid flats of Africa, the fern-clad hills and valleys of New Zealand, or away on the clear blue sea, amongst the islands of the Pacific, the observant traveller will not fail to be struck with the marvellous wisdom of the Providence who has placed ready to the hand of man the food best calculated to supply his need in the climate in

which his lot may be cast, and endowed him with the ingenuity requisite to render it available. The oil-bearing fish, seal, and whale consumed in such quantities by the fur-clad Esquimaux, during the long bright night of an Arctic winter, serve to supply food or *fuel* to keep the lamp of life burning. Heat he must both generate and maintain to live: he therefore wisely clothes himself in the worst conductors of heat he can procure; builds a dome-shaped, wind-tight cell of snow blocks, which soon freeze together like solid marble; and subsists on food rich in carbon. His rude lamp, with its moss wick, is oil-fed like its owner. The Polar bear and Arctic fox, too, in their warm winter coats, wander amongst the ice-floes and along the wild inhospitable shores in search of such oil-bearing food as good fortune may cast in their way. Until at last come milder winds. The wild-fowl, in long wedge-shaped flights, wing their way high overhead, pealing forth their clarion-like calls,—

> "Hawnk! honk! and for'ard to the nor'ard is the trumpet-tone."

The ice-fields rend and crash like distant thunder, as they drift slowly away; the birds chirp and twitter once more amongst the birches and ground willows; the tiny flowers peep forth along the hillsides; spring has arrived, and the reindeer can be hunted, the salmon speared at the falls of the unchained river, and the ptarmigan shot with arrows or trapped amongst the whortleberry bushes; thus yielding an agreeable change of diet with the change of season and temperature. To those who inhabit many parts of India and other countries within the torrid zone, where no real winter is known, animal food is not a necessary. With a little rice, fruit, juarree (*Holcus Sorghum*) flour to make their thin pancake-like "aps," or "chupatees," and the beloved betel-nut to chew, defiance is bid to hunger; whilst a few light cotton cloths, differently folded, constitute head-covering and clothing. Bamboos, mats, and grass, judiciously arranged, form a hut sufficiently commodious for sleeping purposes and as a sun-shade, all culinary operations being conducted in the open air.

That betel-nut chewing enables those who are addicted to it to endure a larger amount of bodily fatigue than they could support without it, there can be little doubt. A small quantity of the nut is placed with a little lime on the leaf of a pepper vine (*Piper betel*); this, after being rolled into a pellet of convenient size, is placed with the finger and thumb far back in the mouth, and is there retained, staining the saliva of a bright-red colour.

The trade in this curious article of consumption is of vast extent throughout the Eastern seas, and the ports of Sumatra, Cochin China, and some other localities, are annually visited by the merchant fleets for its collection. The sea-board of the Acheen country, which is under the government of the Rajah of Achcen, is perhaps the most important trading point, and is pretty generally spoken of as the "Betel-nut Coast;" and the inhabitants of many towns and villages of considerable local importance trade in betel-nut exclusively, not only furnishing cargoes to ships, from the continent of India, but indirectly supplying the Chinese markets (where these nuts are valued at from three to four dollars the pecul,* according to quality), through Penang, whither the cargoes are first sent. The export from one of these Acheenese towns amounts to about sixty thousand peculs annually; the total supply collected from the various ports of shipment on the whole line of the Betel-nut Coast is estimated at ninety thousand peculs per season, commencing in May and ending in August.

The nut is the produce of the Areka palm (*Areka Catechu*), which is one of the most beautiful members of the palm family, shooting its slender stem straight up to the height of from fifty to sixty feet, when a splendid mass of dark green leaves is thrown out like a huge plume of feathers. These palms produce their nuts but once during the year, at which time they present the most beautiful and attractive appearance that can be well imagined; the fruit hangs in clusters at the ends of the long, tough stems from which it is suspended. It is of an elongated oval form, about the size of an egg, and of orange colour, contrasting charmingly with the rich green of the palm leaves. Each nut is enveloped in a thick fibrous coat; on removing which the kernel is found within, covered with a much slighter and more delicate integument, each husk containing one nut only. These, when removed from their coverings, are usually of an irregular, conical form.

Notwithstanding the supply of indigenous food-yielding products to be found in most countries, luxuries have from the very earliest ages been eagerly sought for in far-off lands; and as the ancient Romans revelled in imported dainties, so the Chinese, and those who trade with them, visit distant islands in search of the *Bêche-de-mer* "Trepang," or sea-slug (*Holothuria edulis*). These uninviting, slug-like creatures are in great request in the markets of China as an ingredient in the composition of the gelatinous soups and dishes in which the Celestials so much delight. With pickled sharks' fins, little squares of salt pork, and preserved bamboo shoots, the *Bêche-de-mer* makes a dish perfectly irresistible to a Chinaman. There are six kinds of slugs generally sought for, the best being those obtained by diving amongst the reefs and rocks where they are known to resort; others are taken either by torch or moonlight in the shallow pools, whilst the inferior kinds are gathered by hand from the rocks at low water. The various kinds, when selected and arranged according to their quality, are cleaned, carefully cut open, cooked in large caldrons in the water which they themselves yield, and are then thoroughly dried on shelves arranged in sheds constructed for the purpose. Large quantities of wood are expended in the process, as the slugs require very perfect

* A "peeul" consists of 133⅓ lbs., and is a weight generally used amongst the Malay and Javanese traders. It is equivalent to the "tan" of the Chinese.

preparation before shipment. Some idea may be formed of the number of these strange dainties collected by the slug-hunters, when we inform our readers that one trader obtained amongst the Fejee group, in exchange for various comparatively inexpensive articles of barter, 25,000 dollars' worth in seven months; and the importance of the trade in a commercial point of view may be estimated by the return made on one voyage—peculs of slugs collected, 1,200; cost of outfit, 3,500 dollars; return on sales, 27,000 dollars. The value of *Bêche-de-mer* ranges between ten and sixty dollars the pecul, according to quality.

The edible nests of the cave-swallow (*Collocallia esculenta*) are also extensively collected, and have been known to realize their weight in silver when sold in the Chinese markets. These nests are, like the slugs, made use of in the preparation of soups, for which purpose they are in very high repute. The rocky cliffs on the coasts of the islands of Borneo, Celebes, and some others of the Eastern Archipelago, contain numerous caverns frequented by these edible-nest-building swallows, the roofs being covered with their nests in different stages of forwardness. The source from whence the clear gelatine-like substance of which they are composed is obtained, remains doubtful. The birds, in flitting past the moist, slimy, half-tide rocks, appear to gather something from the surface; this may be some almost microscopic marine production which the bird only can perceive and utilize, or perhaps certain molluscs inhabiting these seas may *secrete* this substance. The newly-constructed nests are of the greatest value, whilst those containing eggs are considered not so good; the old nests in which a brood of young birds has been hatched being of the lowest quality and least esteemed, from the number of feathers often associated with them. The sea-slugs are procured along the shallow reaches and inlets of the innumerable islands dotting the Eastern seas, even as far as the inhospitable and savage Andaman group in the Bay of Bengal. Many valuable discoveries have from time to time been made by the *Bêche-de-mer* traders.

The dreaded *Buccaneers* were for many years simply food-hunters, who derived their name from *Boucan*, a term applied to a rough species of grate or hurdle used by them to barbecue or jerk the flesh of the wild cattle they hunted. These men were bound together by strange laws, made by themselves. Each hunter selected an especial comrade who shared his good or evil fortune, performed half the labour, and on the death of either, the survivor became the possessor of the common stock of arms and other valuables. Quarrels with the Spaniards and others led them to institute the formidable league known as the "Brethren of the Coast," who, in their day, made even kings quake on their thrones, and high admirals tremble. The inhabitants of a great number of the islands of the Eastern seas are indebted to the early navigators for the introduction of the pig, which, finding abundant and congenial food, multiplied rapidly and formed large herds, soon became wild, and by their abundance went far to prevent cannibalism; for although many of these fertile isles literally teem with the richest of vegetable productions, and the surrounding seas swarm with fish, a lurking regard for roast meat prevails, and in the absence of *short pig*, *long pig* is at times partaken of. The *Taro* root (*Caladium esculentum*), the bread fruit, the various edible fern roots, *Pteris esculenta* amongst the number, the sweet potato (*Battata convolvulans*), and many other vegetables and tuberous roots, are cooked in the primitive ovens of the natives; whilst the cocoa-nut affords food, drink, fishing-nets, clothes, cordage, oil, and timber.

In many of the Australasian islands and New Zealand vast quantities of sea-fowl (the *sooty petrel*, or mutton-bird, especially) are captured for food by the sealers and natives. These birds visit the islands annually in vast flocks, arriving generally about the latter end of November, for the purpose of depositing their eggs, of which each hen bird lays one or two, about the size of ordinary goose-eggs and somewhat similar in flavour. The cock bird takes charge of the nest during the day, and the hen by night, taking in turn the duty of going to sea for food. Perfect warrens, like those of rabbits, are formed by these birds, who burrow into the soft earth for a distance of two or three feet, and there form their nests. Some of the islands are so thickly and completely honeycombed by these feathered miners as to render walking a very unsafe proceeding. The collection of the eggs and young birds from the depths of the holes is a task usually assigned to the native women, who not uncommonly find a snake coiled up where the young petrel should be. When a large catch is determined on for preservation and the obtainment of feathers, a number of bird-hunters assemble, and construct a sort of hedge or fence a short distance from the beach, and just before daybreak, when the birds about to proceed to sea to feed are out of their retreats, a sudden rush is made by the whole assembled party of bird-catchers, who with the most hideous yells and cries drive the throngs of waddling, flapping victims, who cannot rise from the ground to fly, towards the centre of the fatal barrier, where a deep pit has been prepared for their reception; into this they are forced, layer on layer, until they literally suffocate each other in their vain endeavours to escape from the treacherous pitfall. The feathers, when plucked from the birds, are worth about threepence per lb., and it requires the joint plumage of about twenty to produce that quantity. Thirty bags of feathers, constituting the cargoes of two trading boats, were obtained by the sacrifice of 18,000 birds. A portion of the birds are preserved by dry smoking, and are extensively made use of. Some of the New Zealand tribes, by whom this bird is called the "Titi," have recourse to a most ingenious and effective method of preservation for it and some other articles of food. The petrels, after having been carefully plucked, have all their bones removed; they are then cooked over the fire in large shallow dishes or platters, made from the bark of the

Totara tree, and when sufficiently done are placed in the natural bottles or flasks formed on a species of sea-weed like a huge variety of the bladder-wrack (*Fucus vesiculosus*) of our own coasts; the heated fat from the birds is then poured in and the sea-bottle securely tied up. Provisions treated in this manner remain perfectly good for a very long time, being completely excluded from both air and moisture.

Eels and other fish are preserved in the same manner. The New Zealanders have some curious and superstitious notions regarding eels, their capture, and preparation; they say: "You must wash your hands before going to catch them, and also on returning, and the bait must be prepared some distance from the house; there must be a distinct fire for cooking the eel, for which you must have a special tinder-box; your hands and mouth must be washed both before and after partaking of them, and should it be necessary to drink from the same stream from which the eels are caught, you must have two vessels of water, the one to drink from, the other to dip from the stream."

Among the hunters of Africa, an elephant's foot, baked in a deep hole beneath the camp fire, is esteemed a great delicacy, as is a buffalo's hump, with the skin on, prepared much in the same manner, by the hunters and trappers of North-West America. These hardy explorers and fur-hunters prepare a very portable and wholesome food, called *Pemmican*, which is thus made:— Buffalo's flesh is cut into convenient flakes and flat layers, like long, thin steaks; these are either hung in the sun or near a slow fire until dry, when the dried meat is ground between two stones until sufficiently fine; a bag is then made of buffalo-hide with the hair side out, and pulverized flesh, after being thoroughly mixed with hot fat, well pressed in; the bag is then securely stitched up and the Pemmican allowed to cool and harden. When required for use, it is cut from the mass like hard sausage-meat, and either eaten cold, or, when mixed with flour or meal, a sort of thick porridge, called "Robiboo," is made from it.

The vast clouds of locusts, which in some countries both darken the air and devastate the land, are eaten greedily by nearly everything possessing life; men, animals, birds, fish, and insects all join in the locust feast. The provident savage lays by a store nicely smoke-dried to consume at his leisure, with such tuberous roots or other underground productions as his sable spouse, armed with her sharp-pointed grubbing-stick, can procure for him. Manna, too, is a substance, the name of which has been rendered familiar to all by the mention made of it in the Scriptures. In the sixteenth chapter of Exodus, the fifteenth and following verses, reference is made to the miraculous supply of this food to the wandering Israelites. Josephus says: "The Hebrews called this food manna, for the particle *man* in our language is the asking of a question. *What is this? (Man hu.)*" The Persian writers often mention manna, and it appears to have been known to both them and the Arabs in very early ages; one kind, called *Guzunjbeen*, is in pretty general use; it is obtained from a shrub called *Guz*, a species of tamarisk. The same description of manna is in some districts called *Toofra*. It is known by that name, and is common at many ports on the Arabian coasts, and throughout the tract of country surrounding Mount Sinai. The manna is usually collected during the months of June and July, amongst the tamarisk thickets, where it drains from the ends of the thorns, and falls on the dry leaves and small sticks which have fallen to the ground; it then congeals into hard masses, and is in that condition gathered for use. The Arabs use it as a substitute for honey, eating it with their bread or other food. A thorny tree, known as the *Camel thorn*, growing in the north of India and Syria, is also manna-yielding, producing the description called *Al haj*, or Persian manna. *Beiruk honey* is in reality manna, and is obtained from the *Ghrab tree*, which is not unlike a stunted aspen. There is also a kind found in the country of Uzbecs, said to be procured from a small tree with a jointed trunk. The Ashur plant of the Arabs yields a kind of manna known as "Arab sugar," or *Shukur el ashur*. There is a description, also, in high repute throughout Persia as a medicine, obtained from a peculiar willow growing in low, moist valleys. A tree of the oak family, found in Mesopotamia, produces its manna, yielding the largest quantity where gall-nuts are most abundant. The *Manna Brigantiaca* is the produce of the larch, whilst the cedars of Lebanon furnish a kind of their own. These various descriptions are supposed to be the result of punctures made in the trees by an insect called *Coccus manniparus*. Large quantities of manna were at one time imported into this country from Sicily and the south of Italy; but comparatively little is now consumed. This is the produce of three varieties of the common ash; two kinds are most common—*Ornus Europæa* and *Fraxinus rotundifolia*. To obtain the manna from these, incisions are made in the bark of the stems with knives prepared for the purpose. The first cut is made near the ground, and others, at two inches apart, two inches long and half an inch deep, are proceeded with at the rate of one cut per day in each row of incisions, working gradually upwards. Immediately below these longitudinal wounds, T-shaped cuts are prepared for the reception of the ends of leaves, gathered from the tree, which act as conductors to carry the sap clear of the trunk, and admit of its dropping into Indian fig-leaves placed on the ground to receive it. These fig-leaves have the peculiar property of drying with their edges curled up, rendering them extremely useful for the reception of the sap, which soon hardens in the sun and air. We have often seen them used by the Indian devotees to place offerings of honey and native butter in, to lay before their idols. August is the month usually selected for tapping the trees, and dry, warm weather is most favourable for the operation, as rain dissolves

and destroys the congealing mass of produce. The manna collected from the bark by scraping, after having run in long tears down the trunk, is considered very inferior to that caught in the fig-leaves, and is sold at a lower price. It has been supposed that during a peculiarly still state of the atmosphere the sweet exhalations from certain plants and trees may become again condensed and fall to the earth in the form of dew, and there are many phenomena connected with these honey-like showers extremely difficult to account for in any other way.

Snakes, the larva of a large burrowing wood beetle, the iguana or fringed lizard, bats, and even a peculiar species of spider, are all made meat of. Earth is also at times eaten to allay the pangs of hunger, until good fortune reveals something more nutritious; and bark has been found no bad material to fall back on when other bread-stuff has proved scarce. The hide from boots, shoes, and moccasins has, on many occasions, served to prolong the lives of shipwrecked mariners and wandering hunters. Notwithstanding its splendour and wealth, the densely-crowded city is, after all, the region in which starvation in its greatest horror is more to be dreaded by the friendless outcast than in Nature's own kingdom—the unreclaimed wilderness.

ESPARTO AND ITS USES.

(*Gramen spartum*, Plinii; *Stipa tenacissima*, Linn.)

ON no point is Nature so hardly pressed as in the pursuit of vegetable fibre. The race of Adam increases apace, and must have the wherewithal to be clothed. We read and write, muse and think, with increasing energy, and must have paper as a vehicle for our mental pabulum. So, in order to supply the wants of a civilization unparalleled in its extent and unsurpassed in the multiplicity of its necessities, Science and Art, Manufactures and Commerce, are allied as an army of attack on Nature's varied and abundant products. But, although the quest be keen, and our knowledge of the uses of substances so extended as practically to obliterate the word "waste" from our vocabulary, the demand for vegetable fibre still waxes instead of wanes, and the earth, both in its wildernesses and cultivated places, is ransacked for something known, and, failing that, for something new. Men of science, skilled in the indicia of plants, naturalists hunting in untrodden solitudes, soldiers in cantonments in some out-of-the-way corner of the globe, traders and voyagers of every class, make up the army of observation. The field comprises the western and southern coasts of Africa, the subtropical regions of America, the islands of Polynesia and Australasia, and the whole of the lower portion of the vast Asiatic continent; but the conditions on which the great prize can alone be won are so complex that a new material fitted alike for fine textile and felting purposes, practicable in respect of cost and supply, remains undiscovered.

It must not be assumed, however, from the failure to secure a high-class fibre, answering in every respect to the requirements of modern manufacturing science, that the diligence and labour bestowed in the search have been expended in vain. On the contrary, many useful sorts, as well as some of exceeding beauty, have been brought to light and utilized in a variety of ways, and when the protean shapes which fibre can be made to assume are considered, it will be obvious that there is verge and room enough for all. For example, it enters largely into the composition of the elegant panels of our carriages, as well as of papier-mâché in its varied artistic forms. It is moulded into cabinet-work, twisted and otherwise fancifully dealt with in the production of art ornaments for the drawing-room and *boudoir*. It is substituted for bones in cutlery, for hair and bristles in brushes, and so on, through every department of formative art. Some fibres there are which, from their abundance and peculiarity of structure, have been dedicated to particular uses; such as jute, as a substitute for hemp in ropes, and in the manufacture of coarse north-country sacking; but this is not where the shoe pinches. That which is so eagerly desired is a fibre capable of being easily cleaned, dressed, bleached, spun, and woven into the goods of Manchester and the stuffs of Bradford: something that shall come in aid of cotton and flax, shall dye well, and generally submit in a satisfactory manner to all the processes preliminary to its conversion into raiment. Nor would its mission end here; for after having draped the dusky forms of the Egyptians and Syrians in blue, the Eastern Asiatics in white, the sable Venuses of the Gold Coast in colours brilliantly incongruous, and made the ladies of the temperate zone "beautiful for ever," it must return, perchance in shreds, with the robustness of its early constitution mellowed by age, to be pounded and torn, recleaned, rebleached, fabricated into paper, and sent forth, again and again, as the servant of an intelligence as grand as it is inscrutable.

Who has not heard of the lamentations of the paper-makers, whose wailings on the paucity of rags, and the total absence of fibre suited to their requirements, were followed by mortuary dirges on the decline and fall of their beautiful manufacture; whilst, as a contemporaneous fact, there continued to bloom and die on the arid plains bordering the sunny Mediterranean, a perennial plant, containing within

its wiry stem no less than 73 per cent. of fibre, eminently suited to their wants. This plant is the *Gramen spartum*, Plinii, *Stipa tenacissima*, Linn. By the Spaniards it is called Esparto, and by the French Alfa. It is placed by botanists among the sedges, and is indigenous to the southern shores of Portugal, Spain, and Italy, as well as to the coast of Northern Africa, from Algeria to the confines of Egypt. It grows in tufts like a rush, is perennial in habit, attains a height of from 18 to 30 inches, according to situation, and, having a basis of silica and iron, flourishes on arid soil. Its principal *habitats*, however, are Spain and Algeria, from which countries a supply sufficient for all present demands may be drawn with ease. There is probably no plant within our knowledge which possesses so remarkable a history as that now under review. Pliny, that most careful and observant of naturalists, gives a surprisingly accurate description of the *Spartum*, and enumerates the uses to which it was put in his day. He speaks of it as a morbid production—"confined to a single country only; for in reality it is a curse to the soil, as there is nothing whatever that can be grown or sown in its vicinity." He describes the species of spartum found in Africa as of stunted growth, of no use whatever for practical purposes; and, altogether, he seems to entertain a very poor opinion of the African variety. It is interesting to note the similarity of uses found for the plant in the days of Pliny to those prevailing in our own. Then, as now, the peasantry stuffed their beds with it, and, no doubt, obtained as springy a couch as is yielded by our own native heather. It was used as fuel, made into torches, woven and plaited into summer garments for the shepherds, and manufactured into shoes which, under the name of Alpargates, are still extensively used by the poorer inhabitants of the Iberian peninsula. It was also very largely used for cordage; and we have the authority of Mr. M'Culloch for the statement that cables made from Esparto, were some years ago—if they are not still—preferred in the Spanish navy to similar stores made from hemp. Merely to enumerate the articles of utility into the construction of which Esparto entered, would in fact be a recapitulation of the utensils and appliances appertaining to the domestic economy and manufacturing industry of the Spaniards and Carthaginians. Pliny most appropriately designates his *Gramen spartum* a marvellous plant; and the reflection is by no means a flattering one that, notwithstanding his painstaking researches, and the uninterrupted use of the plant in the same districts through centuries of time, we should have failed to bring our chemical knowledge to bear on its constitutional difficulties, until our need became so *exigeant* as to render further neglect well-nigh impossible.

During the past ten years the French have been indefatigable in the prosecution of researches in the utilization of Alfa as a paper-making fibre, and it is to the *savans* of that country that we are primarily indebted for a knowledge of the economic conditions of the plant; possibly because it grows abundantly on a portion of their own territory, the natural resources of which the French Government are most anxious to develop. The province of Oran, in Algeria, is that in which the traffic in Alfa is mostly concentrated. There it alternates with the Dwarf Palm and Asphodel, and it grows luxuriantly from the coast up to the minor peaks of the contiguous mountain ranges. The crop should be gathered in the months of April, May, and June, varying according to the forwardness of the season; the object being to secure the plant while yet green, yet as near as possible to ripeness. If gathered too green, the fibre is deficient both in quantity and strength, whilst if allowed to ripen fully, the constituent elements of silica and iron are established too securely in its structure. The best time for collecting, according to Pliny, is between the Ides of May and those of June, a statement which has been fully confirmed by modern practice. On the best method of gathering, the ancient philosopher is equally in accord with our own observations. The plant, he says, is twisted round levers of bone or holm oak, to get it up with the greater facility. It has been proved experimentally, that this is the best mode of reaping the crop, having a due regard to the succeeding harvest, as cutting not only injures the plant, but altogether endangers its vitality, thus rendering the labour of collection exceedingly severe, as the workman must both pull and stoop as he traverses the ground. The *modus operandi* is very simple. Providing himself with a stick of moderate thickness, the labourer grasps a handful of Alfa, twists it round the stick, and, by a sharp pull with both hands, disengages the stalks at the articulations. Securing the bunch under his left arm, he pulls away until, no longer able to hold the produce, he throws it down to be tied into a bundle called a *Manada*, and proceeds with his work *de novo*. These bundles are then ranged in the field to dry, a result which is usually attained in a week, during which time the Alfa loses about 40 per cent. of its weight. The bundles, or *Manadas*, are then packed into bales and carried to the port of shipment. It is not improbable that, in course of time, the propagation of Alfa with a view to increased supply may be requisite in places suited to its growth, as it is only in particular areas that its preparation for export can be conducted, on account of the cost of carriage to practicable shipping points on the seaboard. At present the demand from England and France is exclusively on behalf of the paper manufacture; but should the application of the fibre be extended —and there is no reason why it should not be so with great advantage, its culture will become an important branch of Algerian husbandry. Arrived in this country and stored at a paper-mill, the *Manadas* should be ranged so as to allow of the roots and tops being pulled, an operation which clears the Alfa from a good deal of waste substance adhering more or less to the stalks. It has now the appearance of dried rushes, firm and wiry to the touch, and as unlikely-looking a material from

Day & Son, (limited) lith.

which to manufacture white paper as can well be imagined. Nothing, however, can be simpler. After having been opened and well shaken out, the stalks are thrown into a boiler containing a strong solution of caustic alkali, and are boiled until a handful can be twisted asunder with ease. It has now parted with a good deal of colouring matter, and is ready, after having drained sufficiently, to be broken and washed—operations which are carried on simultaneously in what is technically known as a "washing engine," an elliptical trough having the machinery on one side of a partition, placed down the centre of the engine, but terminating at some distance from either end; the effect of this arrangement being that the material in the engine is made to flow round the partition, or "midfeather," by the rotary action of the machinery. The Alfa now gradually assumes a light yellowish tinge, and with the introduction to the engine of a quantity of chloride of lime the process of bleaching commences. Meanwhile the Alfa is being drawn out into fine short filaments by the triturating action of the machinery. Gradually all colour departs, and, as it flows round the engine, the stuff more nearly resembles a duct of snow-white cream than anything else to which it can be likened. Now the shutters of the washing cover are withdrawn, in order to thoroughly eliminate the "bleach." That done, and the stuff finished as regards sizing and tint, a valve in the bottom of the engine is drawn, the prepared Alfa plunges into the stuff chest at the head of the paper-machine, and, in less time than is consumed in recording the fact, is ready for the hands of the printer.

Nearly allied to Esparto is the *Stipa pennata*, Linn., or feather-grass, which adorns the verdant banks and lane-sides of this country. History saith that the nodding plumes, which are its most striking characteristic, were at one time used by British ladies in the embellishment of their head-dresses. Whether we shall ever clothe our agricultural hinds in Alfa jackets and Esparto shoes, this deponent sayeth not; but even though the plant be never used in England beyond its present limits, the reader will agree with us, that the humble African rush, known in botanical nomenclature as the *Stipa tenacissima*, Linn., is one of the most remarkable and beneficent members of the great vegetable family. B. L.

THE AMERICAN WATER-WEED.

(*Anacharis alsinastrum.*)

By the Rev. W. Houghton.

MOST of our readers are doubtless acquainted with the form of the remarkable plant which made its appearance about seventeen years ago in our rivers and canals, and which in some places has become, from its rapid increase and the difficulty of keeping it in check, quite a nuisance. The history of the introduction into this country of *Anacharis alsinastrum* is not known. Botanists are, for the most part, agreed that it is a stranger, and that it belongs to North America, but the mode of its advent into England and Scotland remains a mystery. The plant appears to have been first observed by that excellent naturalist Dr. George Johnston, in the month of August, 1842, in the lake of Dunse Castle, Berwickshire, which lake is situated upon a tributary of the Whiteadder river, an affluent of the Tweed. "Dr. Johnston sent specimens to Mr. Babington, but little was heard of the aquatic intruder till it was found by a lady, Miss Kirby, in certain reservoirs adjoining the Foxton locks, on the canal near Market Harborough, in Leicestershire: this was in the autumn of 1847." The plants were all *females*, and were found in considerable abundance, growing closely matted together. The reservoirs had only recently been cleaned; consequently the appearance of the weed in them had most probably been recent. The attention of botanists having been again turned to this plant, Mr. Babington, in December, 1847, read a paper before the Botanical Society of Edinburgh, "On Anacharis alsinastrum, *a supposed new British plant.*" This paper was published in the "Annals and Magazine of Natural History," Second Series, No. 2, February, 1848; and there was added to it a synopsis of the species of Anacharis and Apalanthe, by Dr. J. E. Planchon; the paper was also illustrated by an admirable engraving. When Dr. Johnston (the first discoverer) read Mr. Babington's account, he immediately recognized in it the weed he had observed in the lake of Dunse Castle, where he again found it in great profusion, as well as in patches down the Whiteadder in its course to the Tweed.

About the same time the Anacharis made its appearance in Nottinghamshire, in the river Lene, a tributary of the Trent, "growing in great profusion for about a quarter of a mile in extent." It was the same year observed abundantly in the Watford locks, Northamptonshire, "on the same line of canal as the Foxton reservoirs." In the year 1849 it was observed in profusion in the Trent, near Burton; it was noticed near Rugby in 1850, and in the Cam in 1851. Mr. Marshall, of Ely, in his first letter to the "Cambridge Inde-

pendent Press,"* thus speaks of it:—"A remarkable plant has recently made its appearance in the rivers Ouse and Cam, and already abounds to such a degree, as not only to impede navigation, but, what is of far more importance in this fen country, to threaten injury to our drainage." In Letter III. he speaks of it "growing in dense submerged masses, distinguishable at once from all other weeds by its leaves growing in threes round a slender stringy stem. The colour of the plant is a deep green, the leaves are about half an inch long, by an eighth wide, egg-shaped at the point, and beset with minute teeth, which cause them to cling. The stems are very brittle, so that whenever the plant is disturbed fragments are broken off. Although at present it cannot propagate itself by seed, its powers of increase are prodigious, as every fragment is capable of becoming an independent plant, producing roots and stems, and extending itself indefinitely on every direction." Mr. Marshall speaks of it as having been a great source of annoyance to the watermen of the Cam, to sluice-keepers, to rowers, and to swimmers. Since that gentleman published his pamphlet on this water-weed in 1852, the Anacharis has spread far and wide, and has now become common in almost every canal, stream, and pond; causing, in some cases, a very great amount of inconvenience to navigation, besides choking up our fish-ponds, &c. &c.

The rapid spread of the Anacharis is easy enough to account for, when we consider how, on the one hand, the kingdom is intersected with rivers, canals, and streams, which often communicate with each other, and how readily the smallest bits of the weed grow without any root at all. But the question as to its mode of introduction into this country is not so easily answered. I ought to say that some botanists have affirmed that it is no foreigner at all, but a true native; but this idea is improbable. The *Anacharis alsinastrum* is the Elodea *Canadensis* of North America, where, with other species or allied genera, it is common in the rivers. From North America, then, it is most probable our plant originally came; but how did it get here?

There are, as Mr. Marshall says, "various ways in which a plant may be imported. A botanist, in the ardour of that botanical instinct which prompts him to surround himself with as many as possible of the beautiful and varied forms of vegetable life, might have introduced it; but we have no evidence that such has been the case, although botanists have been known to do such things." The same writer thinks it most probable that the Anacharis was introduced at or about Rugby with American timber, during the execution of some of the numerous railways which meet at that point. "We know," he adds, "that in North America the timber is floated down the rivers, in which case fragments of the American weed would cling to it, or seeds might find their way into the clefts of the wood, and if *but one* seed or one fragment retained its vitality in some moist cranny till it reached its final destination, I verily believe it would be sufficient to account for the myriads of individuals that now exist in England."

But it is useless to speculate; the real mode of its introduction will probably never be known. And now we have to account for the presence of the male plant in this country. Hitherto all the individuals observed have been females; but Mr. Bentham and Dr. Oliver tell me that the male plant has, they believe, made its appearance somewhere in the neighbourhood of London during the last summer. This is not very pleasant news, for the one sex was troublesome enough. The question as to how the Anacharis came into the Cam is easily answered:—

"In 1847 a specimen from the Foxton locks was planted in a tub in the Cambridge Botanical Garden, and in 1848 the late Mr. Murray, the Curator, placed a piece of it in the Conduit stream that passes by the new garden. In the following year, on Mr. Babington asking what had become of the stick which marked the site of the plant, he was informed that it had spread all over the ditch. From this point it doubtless escaped by the waste-pipe across the Trumpington road into the 'Vicar's Brook,' and from thence into the river above the mills, where it is now found in the *greatest profusion*. In the case of the Cam, then, we see it *proved to demonstration* that the short space of four years has been sufficient for *one small piece* of the *Anacharis* to multiply so as to impede both navigation and drainage."

I first noticed this weed in the Shropshire Union Canal about two miles from Newport, about ten years ago; it grew in dense patches here and there. Since that time, till within a year or two ago, it grew to such an extent as to destroy almost all other aquatic vegetation. In the "struggle of life," the Potamogètons, the Myriophyllums, and the Water Ranunculuses, disappeared, leaving the Anacharis almost the sole occupant of the water. It used to flower abundantly from July to the end of September, in several places in the canal, but within the last two years or so the Anacharis has almost disappeared; and when I wanted specimens in blossom last autumn for examination, I had to go for them to another branch of the canal, four miles distant, as I could find none where formerly they were so abundant. The Potamogetons and Myriophyllums have since returned. What has been the cause of the disappearance of the Anacharis? That the swans eat great quantities of this weed I have repeatedly seen; but then there was the same number of swans in the canal when the weed was so luxuriant. Pond snails—as the *Lymnei*—eat the weed; and whether it has been unable to bear up against the repeated attacks of swan and snail, I know not: probably to this cause in part, and partly to the fact that quantities are taken out by the canal-keepers and by nets, we must attribute its disappearance.

The Anacharis is one of those plants in which the so-called "circulation" may be conveniently observed. This curious movement of the chlorophyll granules, so familiar to microscopic observers

* See Mr. Marshall's Pamphlet on "The New Water-weed." London: W. Pamplin, 1852.

in the *Characeæ*, may be readily seen by placing a leaf on a glass slide with a little water, and viewing it under the microscope with the quarter or the eighth-inch objective.

It is one of the three genera which form the family *Hydrocharideæ;* the Frog-bit (*Hydrocharis morsus-ranæ*) and Water soldier (*Stratiotes aloides*) being the other two. The genus *Anacharis*, or *Elodea*, as some botanists prefer to call it, is thus characterized by Bentham, in his admirable "Handbook of the British Flora" :—

"Stems submerged, branched, and leafy; flowers sessile, the males with nine stamens, the females with a long, thread-like perianth-tube. Style adherent to the tube, with three notched or lobed stigmas. Ovary one-celled, with three parietal placentas. A small genus, exclusively American."

The specific characters are thus described by the same author :—

"A dark green, much-branched perennial, entirely floating under water. Leaves numerous, opposite or in whorls of three or four, sessile, linear, oblong, transparent, three or four lines long. Female flowers, the only ones known in this country, sessile in the upper axils in a small two-lobed spatha; the slender perianth-tube often two or three [sometimes five or six] inches long, so as to attain the surface of the water, where it terminates in three or six small spreading segments. Male flowers unknown as yet in this country, and seldom observed anywhere. Flowers summer and autumn."

The specimen from which the accompanying illustration was made was gathered last autumn, in Warwickshire, by Mr. R. S. Chattock, of Solihull, an accomplished amateur artist, and drawn by him for this Magazine.

Explanation of the Plate.

Fig. A represents the Anacharis as it grows submerged, the little pink flowers appearing above the surface of the water, natural size.

Fig. *a*, a flower magnified, showing the perianth of six segments, the three stigmas, and the three abortive stamens.

Fig. *b*, the same, stripped of the petalous part of the perianth, showing more clearly the stigmas and stamens.

Fig. *c*, the two-lobed spatha enclosing the lower portion of the perianth-tube, magnified.

Fig. *d*, a section of the bottom of the perianth-tube, showing ovary with its three contained ovules, magnified.

Fig. *e*, an ovule, magnified.

Fig. *f*, transverse section of portion of stem, showing arrangement of leaves round it.

PETER VON CORNELIUS.

THE great German painter who died during the month of March was then in the eightieth year of his age, for he was born in September, 1787, in the town of Düsseldorf. His father was director of the museum at that place; and thus, from his earliest days, the young Cornelius was associated with the arts. His desire to be a painter was not repressed or reproved by his parents, and in his seventeenth year he had already begun his studies in art with much promise of future excellence. It was then that his father died; and as there devolved upon him and upon an elder brother the care of mother and young ones, it was a question whether he ought any longer to think of pursuing the painter's profession. It was suggested that he should adopt some handicraft which might prove more quickly remunerative; but the difficulty was surmounted, and he clung to art. Good fortune came to him sooner than to most men, for some of his earliest designs attracted notice and were admired. The study of the antique, inculcated by Winckelmann, had not entirely engrossed his attention. He had fallen, rather, under the influence of a modern writer,—the greatest Germany has produced. The comprehensive, the all-embracing genius of Goethe acquired a lasting power over him: that genius which grappled with the noblest subjects, and never disdained to treat even of the smallest details of any branch of art,—as witness the dramatic criticism in "Wilhelm Meister." A series of designs illustrative of "Faust" first displayed the creative force of the young Cornelius. Niebühr wrote about him, in after years, "Cornelius is an earnest enthusiast for Goethe; perhaps none more so: certain is it that Goethe has inspired no other person so fully and so powerfully."

The artist was but nineteen when he produced another and a kindred work,—the illustrations to the "Niebelungen Lied." Thus, national subjects early took possession of his mind. But they were not to retain exclusive possession. In Rome he would be subject to classic influence, and to Rome —the goal of every painter's first ambition—Cornelius desired to go. He was twenty-four years old, however, before the project could be matured; and, when at last it was carried out, he intended to make a very long sojourn in the classic capital. He found congenial society there. Young and aspiring fellow-artists gathered round him,—Schnorr, Veit, and the brothers Schadow. There too, and always in close companionship with Cornelius, was a greater spirit than any of these,—Overbeck, the pure, the noble, the refined: the Fra Angelico of our time. With Overbeck Cornelius dwelt, in an old convent, and in the simplest style. The two friends were nicknamed St. Paul and St. John. Cornelius, with his ardour and energy, his comprehensiveness and tolerance, was the St. Paul; Overbeck, with his rare gifts and loveable graces, but with a power less practical than that of his brother artist, was the St. John.

Cornelius took part in the decoration of the

Villa Bartoldi, and had to thank the Prussian Consul-General, whose residence that villa was, and the Prussian Ambassador, Niebühr, for patronage and influence kindly exerted. The Crown Prince of Bavaria was able to bestow upon the rising painter a more substantial reward than any he had before received. This royal German, being greatly impressed with the promise Cornelius showed, proposed to carry him off to Munich to decorate the favourite city,—the greatest and most costly "Ludwig's Lust." At first Cornelius hesitated—he doubted, perhaps, whether he had been long enough in Rome;—but evidently this was such an opportunity as might not occur again. It was well to take it while it offered, and Cornelius decided to do so. He had looked with no exclusive eye upon classic art; but he knew that Italy was the best school for him,—the school in which lessons varied and valuable might best be learned. For there, in Italy, on ground that is dear to both, the lover of the mediæval meets the lover of the antique: the heroic painter may there learn tenderness; the religious painter, strength. Cornelius had, on the whole, profited by the time he had spent in Rome; and he was full loth to leave it. It may be, however, that he left it just at the right moment. Had he stayed longer, he might have lost that German character which some of his best works —his best of all indeed—now possess. Looking at the gigantic attempts to reproduce the form and presence of the antique, made when Cornelius went to Munich, immediately after his residence in Rome, one is inclined to think that he did not return to Germany too soon.

In the Bavarian capital there was much to be done. The decoration of two large halls in the Glyptothek was confided to Cornelius. One of them is styled the Hall of the Heroes; the other, the Hall of the Gods. The compositions placed by the painter in both are intensely classical, using the word rather with reference to form and letter than to the spirit, and not exactly in the sense in which one would say that the compositions of Ingres are classical. The German painter was more successful when he took Michael Angelo for his model, and did for the Ludwig's Kirche at Munich what had been done for the Sistine Chapel. "God the Creator" and "Christ the Judge"—two great compositions in this Munich Church—are works which will do very much to perpetuate the painter's fame. They are two, and by far the most important, of a great series illustrating the Christian creed. "Christ the Judge" is perhaps the noblest of his efforts. Never was he more ambitious than in planning this work; and if, when we have admired the correctness of the drawing, and the dramatic expression of the whole, we stop to notice the crudeness of its colour, our respect for the painter should not be lessened. His attainment was high; but his attempt was higher. And this is right. For in all art,

> "A man's reach should exceed his grasp,
> Or what's a Heaven for?"

Fifteen or twenty years were occupied upon the decoration of Munich. Besides the frescoes in the Glyptothek, and the great compositions in the Church of Ludwig, there was executed by Cornelius, in the Pinakothek, a great work illustrative of the history of art. When all these things were done, the artist took some leisure, and visited Paris and London. Another great opportunity was soon to fall into his hands; and that was a commission from the King of Prussia to compose a "Christian Picture Cycle" for the decoration of the Campo Santo or Royal Mausoleum, destined to form one of the wings of the new cathedral. "The Four Riders of the Apocalypse"—one of the designs executed for this place of burial—is one of the most characteristic of Cornelius's works; perhaps the most powerful of all. It is not beautiful; it is not attractive; it would never be popular with the admirers of conventional sentiment, borrowed graces, and namby-pamby mediocrity. But it is strikingly original. It is a thoroughly German work. The weird power of the North is in it. In painting it, Cornelius went back to the early traditions; and the spirit of his own race nerved him for the task. There is something of a savage strength about it; but instead of its being the work of an untutored mind, the brain that conceived it, and the hand that wrought it, had learned lessons enough from the masters of old days, and were but now drawing forth from the sources which had always been within the artist himself.

We have briefly spoken of the chief works of Cornelius. Only the barest record of his life is it now possible to give. He died at a ripe old age, when he had gained the love of many, and the respect of all. Members of his school are scattered over Europe; some of them famous already. Even in England his influence is not unfelt. Throughout his career Cornelius was a prophet who was by no means without honour in his own country. Bavaria and Prussia loaded him with rewards; and, so long ago as 1838, he had the satisfaction to know, by his election as a Foreign Member of the Institute of France, that he was duly esteemed in that land from whose verdict on art questions there is, in these days, no appeal.

THE MICROSCOPE.

UNDER this heading we propose to give, from month to month, a series of notes upon the progress made in microscopic research and the improvements recorded in microscopic appliances. Every one has a microscope nowadays, and, what is more, nearly every one who possesses an instrument turns it to some account in the investigation of various forms of animal and vegetable life. Hence a good many of our readers must be anxious to know what other microscopists than themselves are doing, and this information we purpose giving them. Our subject naturally divides itself into two sections, one relating to the discoveries made with the assistance of the microscope, and the other to the new forms of apparatus devised to facilitate the study of microscopic objects. We shall treat of the discoveries first.

The event of greatest novelty, though not of greatest importance, in the recent history of microscopy, is the discovery of the so-called *gregarinida* in the false hair of which ladies' chignons are composed. This startling discovery, which was first announced in England in the pages of the *Lancet*, was subsequently commented on by the *Daily Telegraph*, after the usual fashion, and not only gave rise to a feeling of considerable dissatisfaction and annoyance among ladies, but had the much more serious effect of materially damaging the chignon trade, and throwing many poor people out of honest employment. A professional journal like the *Lancet* should not have permitted the insertion of the paragraph describing the gregarinida of hair. The individual responsible for it must either have been very ignorant of zoology or must have pandered to the never-dying desire of penny-journalism for something sensational. The examination of the infected hair, which was conducted by several microscopists of eminence, has proved incontestably that there are no such things as gregarinida to be found in hair. The original account in the *Lancet* describes the gregarinida as proceeding from the common pediculus of the louse and attaching themselves to the hair, and it certainly conveyed the impression that they were a species of insect. Nothing could be more absurdly erroneous than this. Not only have no gregarinida been found in the pediculus, but even did they exist in this insect, or were they discharged from it, they could not possibly live upon the hair. They are the very lowest form of animal life, lower than even the sponges or the infusorial animalcules. "They are the inhabitants of the bodies, for the most part, of the invertebrate, but also of the vertebrate animals, and they are commonly to be found in abundance in the alimentary canal of the common cockroach and in earthworms. They are all microscopic, and any one of them, leaving minor modifications aside, may be said to consist of a sac composed of a more or less structureless, not very well defined membrane, containing a soft semi-fluid substance, in the midst or at one end of which lies a delicate vesicle; in the centre of the latter is a more solid particle. . . . The *gregarinida* are devoid of mouths and of digestive apparatus, living entirely by imbibition of the juices of the animal in whose intestine or body they are contained." * The character of these creatures in the perfect reproductive stage has not been made out, so that the foregoing description embraces pretty nearly all we know about them. It is evident, however, that they could not exist on hair under any circumstances. However, it must be admitted that many specimens of hair contain both animal and vegetable parasites. The animal parasite is the common pediculus; the vegetable varieties belong to the Algæ (sea-weed tribe) and the Fungi (mushroom tribe). The pediculus accompanies living hair only; it requires the warmth of the human body as one of the conditions of its life, and therefore it cannot exist in the hair from which such ornamental appendages as chignons are manufactured. The egg-cases might be thought to remain, but it is not so. The process of cleansing to which the hair is submitted completely removes them. But that they are present in the crude hair which comes to the manufacturer is undeniable, for in a specimen of the refuse from one of the hair machines examined by us, the particles of hair were found in many instances to have these empty egg-capsules attached to them. As to the vegetable parasites we doubt their being of much importance. No doubt fungi are productive of many serious hair diseases; but, so far as we have been able to determine, these species are not present in the hair of the chignons. It is, however, a fact, that in many samples of hair employed in the manufacture of chignons, a number of minute particles, evidently not part of true hair structure, may be found. These, when first placed under the microscope, appear to be vesicles, which, under a high magnifying power, seem to be divided into two, four, or eight compartments. This is a feature which calls to mind the elementary Algæ, to which, no doubt, the particles belong. Beyond this stage in their history we have not examined this parasitic growth; but two or three microscopists interested in the matter have caused these elementary particles to go through the whole course of their development by placing them in a solution of sugar and water. The observations of such specimens shows that they are undoubted algæ, since they present the usual spores and antheridia. There is no reason to believe that, even if present

* Huxley, "Lectures on the Elements of Comparative Anatomy." Churchill, 1864.

in the chignons, they could possibly germinate, and thus pass from the artificial to the natural hair. This is all that can be fairly said in regard to the notorious "gregarine" discovery.

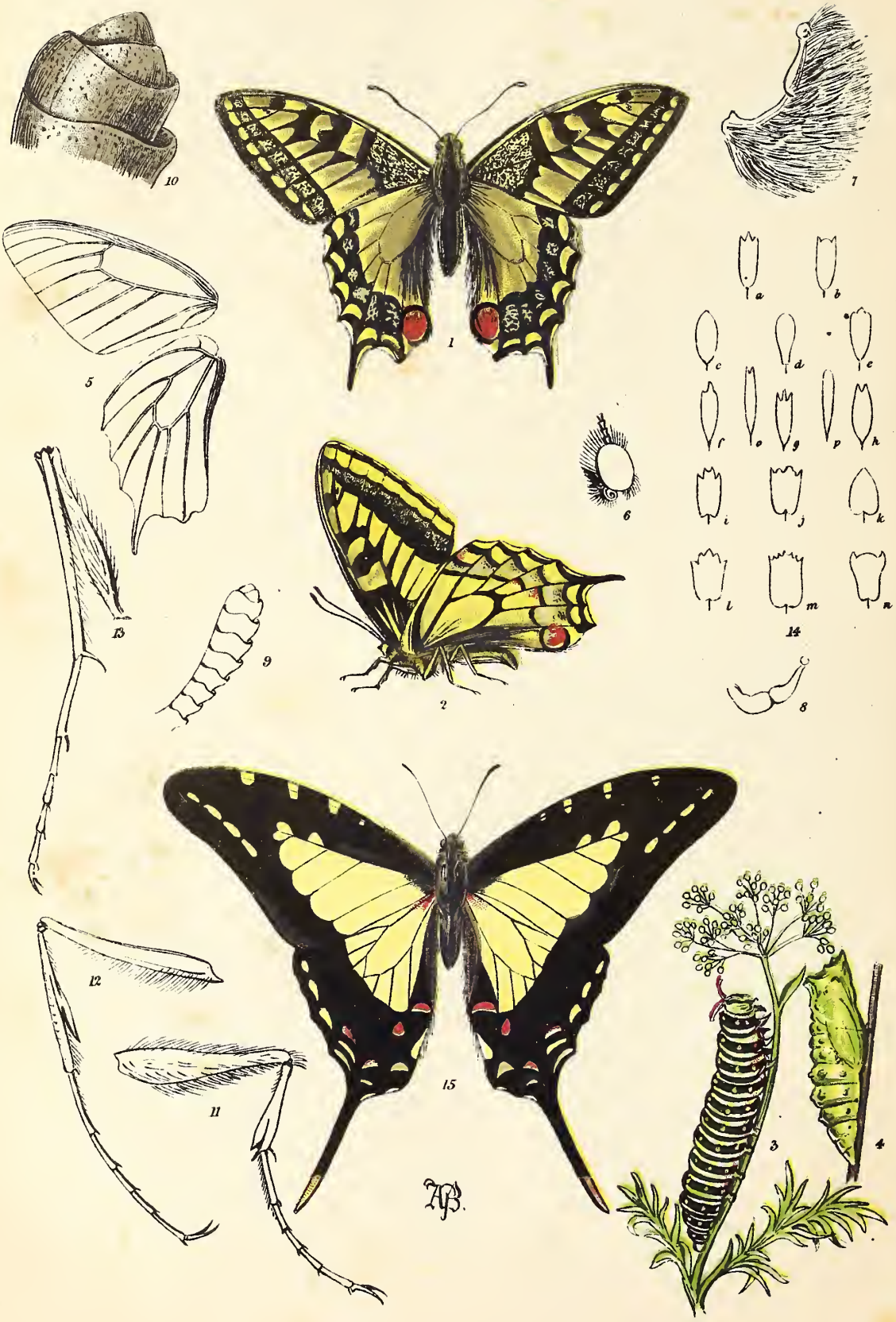
The microscope has recently been employed with advantage in the study of physical geology. Sections of fossils have frequently been examined under high magnifying powers, and many important points have been thus made out; but till quite recently the microscope was not employed in the examination of rocks. Mr. David Forbes, F.R.S., has called attention to the fact that rocks which it is difficult otherwise to distinguish from each other may be readily discriminated when thin sections are placed in the field of the microscope. He himself has found this method of inquiry of the highest importance in the course of his numerous investigations into the metallurgical value of various minerals. Mr. Sorby, F.R.S., has also, we believe, employed the microscope to discern the intimate structure of metals and minerals, and is still engaged in researches of this kind. In the field of palæontology (the science of fossils) the microscope has lately thrown much light on inquiries which could hardly have been completed without its assistance. Mr. Carruthers, of the British Museum, and Mr. E. Ray Lankester have made out some interesting points of structure by submitting thin slices of fossils to microscopic examination. The former has been engaged in examining our fossil plants, especially those from the coal formations, and has considerably modified what were before regarded as orthodox views. The latter has, with the assistance of the microscope, been able to show that a fossil fish examined by him is quite new to science. Of course, his conclusion is in some measure based upon the general form of the fossil, but the microscopic evidence is equally important. It so happens that in the family of fossil fishes known technically as the *Cephalaspidæ* there is one division the bones of which possess small irregular cavities with lines proceeding from them. These cavities are called *lacunæ*, and in order to see them a very finely-ground thin slice of the bone must be placed under the microscope. In trying to discover the species to which his specimen belonged, Mr. Lankester submitted a delicate section to microscopic examination, and he soon perceived that these *lacunæ* were not only present, but were large, and "very densely packed, arranged at right angles in the different lamellæ of the bony material, so as to produce the appearance of cross-hatching."* This discovery removed much of the difficulty of the diagnosis, and helped, with the external characteristics, to indicate the true relations of the fish, which Mr. Lankester has named *Didymaspis* (δίδυμος, twin, and ἀσπίς, shield).

In the department of botany microscopists have not been idle. Herr Reichert has been exploring the circulation of the sap in plants, and has pointed out that of the two distinct portions of sap which are found in the little vesicles of which plants are built up, but one of them is engaged in rotation, the central fluid being always stationary. The phenomena of the circulation in plants may be seen by any of our readers possessed of a good microscope, by placing under a moderately high power a semi-faded leaf of that common canal weed, the *Anacharis alsinastrum*. In France M. Chatin has been working at the anther, that little powdery seedlike body which is found at the top of the stamens of a flower. This was formerly considered to possess only two envelopes or linings; but with the aid of the microscope M. Chatin has been able to distinguish a third coat. In our own country the veteran Gulliver has been continuing his researches upon the microscopical structure of plants. Quite recently he has been examining the appearances of pollen-grains. The pollen is the fine soft powder which is discharged from the anther above mentioned, and which one sees so abundantly distributed over the inner parts of the flower in the lily. Professor Gulliver has examined the pollen-grains of a large number of plants, and he has found not only that their particles have, when magnified, a definite shape and outline, but that these are generally peculiar to each plant. This discovery is important, for it shows that by means of the microscope we may often determine the exact species of a plant by a portion of its pollen sufficient to rest upon the head of a pin.

In the study of the structure of the lower animals, the employment of the microscope is indispensable. In this branch of anatomy a good deal has been recently achieved. Two new and curious species of wheel animalcule have been discovered by Mr. Henry Davis, and described by him to the Microscopical Society. Hitherto it was thought that only one wheel animalcule (*Melicerta*) had the power of constructing a habitation for itself. Mr. Davis has shown that this opinion is not correct, since he has seen the species he has discovered arranging the minute pellets one by one, and fastening them together by means of a glutinous substance into a veritable domicile. The little animalcule appears to be provided with a microscopically bearded chin, which is employed in the process of domestic architecture. The brain of that singular animal, the cuttle-fish, has been examined under the microscope by Mr. Lockhart Clarke, and appears to be a wonderful piece of nervous complexity. It has been always considered that the cuttle-fish is the highest of the animals devoid of an inner skeleton; but Mr. Clarke's researches, though of too special a character for further notice here, show that the brain of the cuttle-fish is of a higher stamp of organization than was formerly supposed.

Silk-worm culture is not simply an interesting pursuit for the dilettanti, it is a business of as much importance to the countries in which it is followed as any of the staple manufactures. Of late years, however, a sad blight has fallen on the French silk-worms, and has materially damaged the silk-trade. To discover the cause of this was of the most vital

* The *Geological Magazine*, April.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interest, and therefore several French chemists and microscopists undertook the examination of the diseased and healthy worms. The result has been the discovery of the exciting cause of the disease. It has been found that the infected worms contained, scattered through their tissue, a number of minute bodies, probably spores or germinating particles of some low vegetable organism, and which have been termed *pebrine corpuscles*. They are of a peculiarly vibrating character, and if they happen to be present in the egg, they are sure to be found in the body of the future caterpillar. It was thought that they were gregarinida, but such a supposition is incorrect. That they are vegetable spores, which are capable of producing fermentation, and thus of decomposing the vital fluids of the silk-worm is clear, from an experiment made by M. Bechamp. M. Bechamp removed some of the fluid from a caterpillar infected with pebrine corpuscles, and placed it in a solution of sugar and water. The result was that alcoholic fermentation soon took place. Though not directly referring to microscopy, it may be mentioned that the source of these pebrine corpuscles has also been discovered by the French observer we have named who states that it is the wet or moist mulberry leaves with which the worms are fed. "He took a number of worms from good healthy eggs, and divided them into two batches. One of these he fed with mulberry leaves, and to the other he gave leaves highly charged with moisture. He found that all those of the batch fed with dried leaves passed through their metamorphoses; whilst those in the other series perished."*

There is no subject which has of late attracted more attention from savants, especially in France, than that of spontaneous generation. In its investigation the microscope has been extensively used, and, according to both advocates and opponents of the theory, has furnished very valuable evidence. Besides M. Pouchet, the great supporter of the doctrine of *heterogeny*, the theory has found a new advocate in M. Donné, who, in a recent number of the *Comptes Rendus* of the French Academy, calls attention to certain experiments made by him, and which he thinks establish beyond all question that organisms—living vegetable and animal forms—spring directly from decomposing animal matter. One of M. Donné's experiments is extremely interesting. He took a hen's egg, and having pierced it with a red-hot needle, and allowed a portion of the contents to escape, he filled the space left by the evacuated contents with distilled water. Sealing up the aperture hermetically with wax, he left the egg exposed to a temperature of from 17° to 24° of the centigrade thermometer* for about five days. He then removed the seal, and placing a drop of the egg-fluid under the microscope, he found it swarming with minute organisms termed *vibrios*. These are either animal or vegetable; science has not determined which; but they are certainly living creatures, and if they were not derived from the atmosphere, which generally contains their eggs in abundance, they must have proceeded directly from the decomposing matter of the egg. M. Donné's facts are the most difficult to refute which have yet been put forward, and go nearer to destroy our belief in Harvey's maxim, *omne vivum ex ovo*, than any which have been yet presented to us.

Adulteration is another subject concerning which the microscope provides us with useful information. It was frequently had recourse to by Dr. Hassall during the labours of the memorable *Lancet* Commission, and only the other day it was employed for a similar purpose in France. M. T. Roussin has found that almost all the French soft-soaps, which should consist of potash and the acids of fat, are extensively adulterated with starch. Starch consists of extremely fine particles of an ovoid shape, and presenting a number of concentric coats. M. Roussin suspecting the presence of adulteration in the soaps examined by him, placed a small portion in the field of a microscope, under a power of a quarter of an inch focus. He soon perceived the starch granules in very large number, and presenting their characteristic shape, wrinklings, and series of consecutive layers.†

We have already disposed of the space allotted to us in discussing the results recently achieved in the labours of microscopists. The second portion of our subject, therefore—that relating to the advance made in the invention of microscopic apparatus and appliances—we must defer to our next number.

* *Popular Science Review*, April, p. 237.

* Equivalent to about 62° and 75° of Fahrenheit's thermometer.

† See the *Chemical News*, April 5th.

OUR BRITISH BUTTERFLIES:

Their Structure, Habits, History, and Foreign Relatives.

By Arthur Gardiner Butler, F.Z.S.

PART I.

IN a former paper we have endeavoured to show how closely some foreign butterflies resemble our own: we now propose to point out how far some allied species excel ours in beauty of form and colouration; and as it appears to us that the study of British Butterflies, with regard to their structure, habits, &c., has been but imperfectly worked out, we shall strive to do something towards the attain-

ment of a more thorough knowledge of these beautiful insects. The lovely butterfly that comes first on our lists is known to naturalists as the *Papilio Machaon* of Linnæus, but more popularly under the title of the *Swallow-tailed:* it exceeds all the other British forms in size, and, when flying near the ground, its sailing, rook-like flight gives it the opportunity of exhibiting all its beautiful and simple colours to great advantage.

Never shall we forget the day when our eyes first feasted on that glorious sight—the Swallow-tailed upon the wing. It had been a drizzling, misty morning, and even as we left home the fine sleety rain came down in fitful showers, which, contrasting with the warmth of the atmosphere, annoyed us with their prickly chillness—a thing, by the bye, well calculated to produce sneezing-fits. We did not dare to hope for butterflies, though we did occasionally come across some few stragglers of the poor hardworking honey-bee, carrying their sweet burden through the damp, heavy atmosphere; having arrived at a clover-field, we stood watching the wide expanse of purple flowers, when an object met our view, soaring aloft, then sweeping the field like some small bird of prey in search of a victim. As it approached, we could perceive that its wings were of a yellow colour; and it soon settled not many yards from our feet. One moment and it would be a captive: to open our umbrella-net, rush forwards, and swing it round, was the work of an instant. But "there is many a slip," says the old proverb—a brother's net met ours with a crash, and we perceived that the fluttering prisoner was his prize. That very morning a second specimen was beneath his net, but, in his excitement, he raised the gauzy prison, and away soared the freed insect into the now blue sky, and rapidly disappeared from sight.

Strangely enough, all the Swallow-tailed butterflies that we have seen on the wing have come across our path whilst collecting at Herne Bay, a place not mentioned in any list of localities for the insect. One year we saw seven specimens, and several others have been both seen and chased by us during subsequent visits to that place.

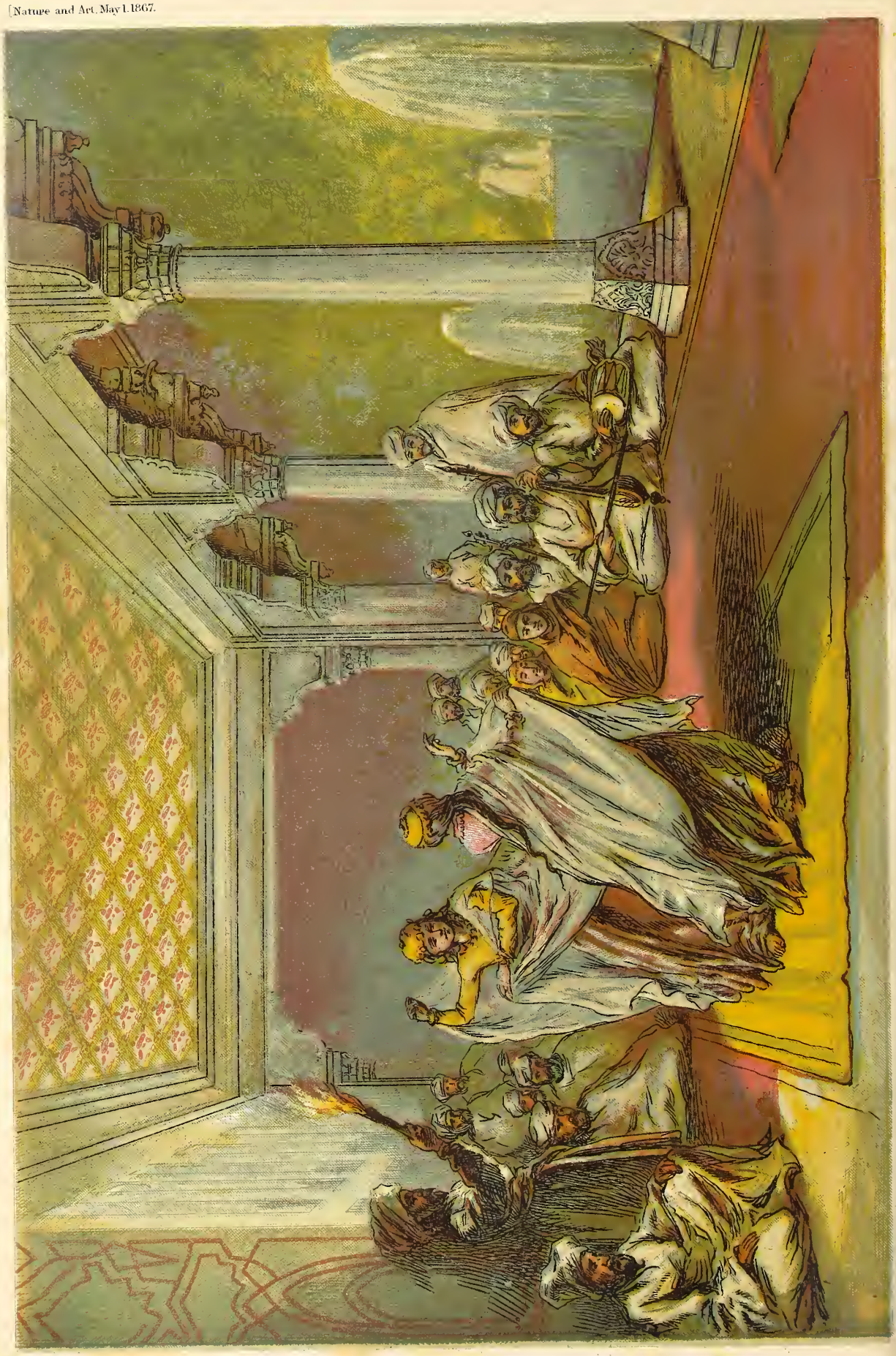
The genus *Papilio*, to which this species belongs, is a widely distributed and most beautiful one. Many of its forms very nearly approach the Swallow-tailed in pattern and coloration; but as, in the present series of papers, our object is not merely to point out similar forms, we have chosen, as a representative of this species, a very beautiful insect from New Grenada, which is described and figured by Mr. Hewitson, in his "Exotic Butterflies," under the name of *Papilio Dioxippus*.

The caterpillar of the Swallow-tailed is green, having each segment of the body encircled by two black bands, the hinder band with a row of six orange spots. The head is furnished with a reddish forked appendage, which, when the creature is terrified, emits a strong-scented fluid; and by this means it is said to protect itself from the attacks of those destructive parasitic insects, the ichneumon-flies.* It feeds upon wild carrot (*Daucus carota*), fennel (*Anethum fœniculum*), milk parsley (*Peucedanum palustre*), and other Umbelliferæ.

The chrysalis is bright yellowish green, slightly darker in some parts, and is generally found attached to grass stalks by a thread round the middle, and a small web at the end of the tail. When the butterfly is nearly ready to emerge, the pattern and colouring of the upper wings and body may be distinctly seen through the thin shell-like covering. The wings are then always very small and thick. At the time of transformation, the chrysalis first splits longitudinally from the head to the end of the thorax. The hairs of the back are first seen to appear through the narrow opening, and gradually the head begins to rise encumbered by its imprisoned antennæ which, in the chrysalis, lie along the edges of the wings. Then the thin envelope cracks at the sides, the under anterior portion is forced away from the upper part, the legs begin to appear two at a time, the antennæ are released and brought forward, and the long proboscis is uncoiled; the opening gradually enlarges, and the insect, bringing its legs into action, soon draws itself from its place of confinement; and, can we add, "flies away to enjoy the pleasures of sunshine and nectar." Not so; there is much to do yet ere it can attain to such aërial joys. Its wings are now small, shrivelled, thick, and heavy with moisture; therefore our butterfly runs up the nearest wall or upright stem, and, hanging its wings downwards, sits quietly for several minutes, and now those beautiful organs of locomotion begin to increase in size so rapidly, that a sharp eye may even detect their growth. If closely examined at this stage, it will be seen that the nerves, or veins of the wings, are filled with a liquid which, being forced into them, radiates through exceedingly minute nervelets over the entire surface of the wing; which, being formed of two delicate and distinct tissues, is at this time slightly swollen, balloon fashion; and thus, in about twenty minutes, the wings attain the required dimensions. When they are nearly full-grown, the insect commences to open and shut them, which prevents them from clinging together; after which it remains perfectly quiet until they are firm and ready for flight. The butterfly then commences to flutter (some moths will do this for many minutes), and, after taking a wheel in the air, as if to satisfy itself of the reality of its newly-acquired powers, it flies away to the enjoyment of life and pleasure.

The wings of the genus *Papilio* possess a more perfect set of veins than those of any other group of butterflies, and, on that account, they have been so frequently employed to explain the names of their various branches, that it would be useless for us to repeat the oft-told tale. We would therefore refer all inquiring minds to "Westwood's British

* The disagreeable odour of caterpillars is a great protection from the attacks of birds, lizards, and many other foes.



Butterflies," where they will obtain any extra information they can require. Our figure is traced from the wing itself, which we had previously denuded of the scales in the following manner :—

With a preparation of gum-lac, dissolved in spirits of wine, stick your wing down upon a piece of card. When it has thoroughly dried, which will probably be in an hour or two, dip a camel-hair pencil in a solution of gum-arabic, and work it carefully about, over the surface of the wing. This, after a short time, will remove the scales; after which wash the wing in clean water, and repeat the process for the other side. By this means you may render the wings of butterflies quite transparent, and the veins may then be clearly seen.*

The scales themselves, upon which the colouring of all butterflies and moths entirely depends, are in this species exceedingly variable in outline, as will be seen by reference to the plate, where all the forms which we have been able to detect are figured.

The legs of the Swallow-tailed are long and bristly. The two front pairs are furnished with a central pad-like appendage; the proboscis, or tongue, is long, wiry, and black; the palpi, or feelers, by means of which the tongue is partially concealed when at rest, are singularly small and curiously constructed.

The caterpillar may be found from June to August. The chrysalides can be obtained for a few pence from almost any dealer in objects of natural history. The perfect insect appears from May to August, and may be taken in fens near Cambridge, Norwich, Yaxley, Burwell, and Hornsey; Whittlesea Mere, at Pulborough, in Sussex, and at Herne Bay, in the Isle of Thanet.

* Great care is required in preparing these wings, as the substance of the alary membrane is so brittle, especially in butterflies of the family *Satyridæ*, that it is next to impossible to avoid breaking them.

Explanation of Plate.

Fig. 1. *Papilio Machaon* (Linn).
„ 2. „ „ „ (underside).
„ 3. „ „ „ (caterpillar on food-plant).
„ 4. „ „ „ (chrysalis).
„ 5. Wings, showing the nervures.
„ 6. Head, magnified.
„ 7. Palpus, magnified.
„ 8. „ denuded of scales.
„ 9. Club of antenna, magnified.
„ 10. Tip of antenna, highly magnified.
„ 11. Proleg, magnified.
„ 12. Middle leg.
„ 13. Hind leg.
„ 14. Scales on the wings, &c.
a, prismatic or red scale.
b, *c*, *e*, yellow scales, *c* commonest form.
d, blue scale.
f, *g*, black scales; *h*, yellow.
i—*p*, black; *o*, *p*, marginal leg scales.
„ 15. *Papilio Dioxippus*, (Hewitson, New Grenada).

THE VALE OF CASHMERE.

By William Simpson.

CASHMERE, like many other places, has more than one etymology. The usual idea is that it is derived from *Khush*, which means happy or satisfied; hence Cashmere is called "The Happy Valley." The Emperor Baber, in his Memoirs, gives another derivation. He says that "the hilly country of the Sinde, or Hindus, was formerly inhabited by a race of men named Kas, and he supposes that, from a corruption of the name, the country of Cashmere was so called, as being the country of the Kas, the denomination *mir* or *mere* being still united with the names of several geographical divisions, such as Jesalmeer, Ajmeer, &c." The derivation from *Khush* is that generally accepted, because to every one it seems appropriate that it should be called "The Happy Valley." It realizes many of the features which Dr. Johnson gave to the Happy Valley of Rasselas. It is enclosed like a cup between high and picturesque mountains, whose beauty is celebrated, not only through Asia, but all over the world. The soil is so fertile, that it might be called a garden; add to this garden, lakes, rivers, fountains, holy shrines, every variety of hill, many of them high in the region of eternal snow, and to all these a temperate and a delightful climate, and you have a perfect paradise upon earth. Abul Fazel, the Mahomedan historian, who wrote about three hundred years ago, describes this country. He says, "Violets, roses, narcissuses, and innumerable flowers, grow wild." "The whole of Cashmere represents a garden in perpetual spring." Well may it be said,—

If woman can make the worst wilderness dear,
Think, think what a heav'n she must make of Cashmere!

Among the many associations connected with this romantic and beautiful locality, it is no new one that Eden may have had its place somewhere about it. "Cush" is the Hebrew word for Ethiopia; and the Gihon, the second river of Eden, "the same is it that compasseth the whole land of Ethiopia." It could not fail to strike any one looking at the map of Cashmere, that here is a land of *Khush*, round which the Indus flows, and "compasseth" is a correct description of the geographical fact. That it is a holy place is declared by Abul Fazel: "The Hindoos regard the whole of Cashmere as holy land; forty-five places are dedicated to Siva, sixty-four to Vishnu, three to Brahma, and twenty-two to Durga, the wife of Siva. In seven hundred places the figures of snakes are carved,

which they also worship." These remains of the worship of the serpent * are very curious, and much might be made of it as an evidence; but it is not the purpose of the present article to express an opinion upon either one side or the other. These statements are quoted to show the interest which attaches to this part of the world, and they may serve to explain why the tendency of thought in our own time is to make this central region the cradle of the human family. Near to this the Hindoo places among the unapproachable heights of the Himalayas the heaven of Maha Deo; from whose throne † of gems there flows the sacred Ganges, reputed to be one of the rivers of Eden by Josephus, in which the worshipper purifies himself both bodily and spiritually, and desires that, after death, his body may be thrown into it, as into the way to heaven.

Cashmere itself is "holy land." To the north is the Hindoo Koosh. To the ear accustomed to the language of India this word *Koosh*, or *Kooshie*, requires no explanation: it is in constant use to express satisfaction or happiness. It was from this more northern direction that the Hindoo went south, with the then simple worship of the Vedas, with the Soma juice and the *Cusa* grass. The *Chas*dins, or Chaldeans, seem to have been some peculiar order of priests or Brahmins, and modern speculations point to the region of the Hindoo Koosh as the source from which they wound westward to the Euphrates. A passage from the "Mahabharat" will show what were the ideas of this early people. It is from an address by Chrishna to Arjuna:—

Hereafter, ne'er shall be the time, when one of us shall cease to be.
The soul, within its mortal frame, glides on through childhood, youth, and age,
Then, in another form renewed, renews its stated course again.
All indestructible is he that spread the living universe;
And who is he that shall destroy the work of the Indestructible?
Corruptible these bodies are, that wrap the everlasting soul—
The eternal, unimaginable soul.
For he that thinks to slay the soul, or he that thinks the soul is slain,
Are fondly both alike deceived. It is not slain—it slayeth not;
It is not born—it doth not die; past, present, future, know it not;
Ancient, eternal, and unchanged, it dies not with the dying frame.

The associations and ideas of those ancient days contrast strongly with the realities of the present. The ideal Greek of Homer and the reputed character of his modern successor are no less at variance than is the Hebrew of the Law and the Prophets with him of later times. So with the people of Hindostan; the pure religion of the Vedas appears in all its simplicity in opposition to the thirty-two million of gods, which form the Hindoo Pantheon of the present. The Pandean heroes must be contrasted with the cowardice and cruelties of the Indian mutineers.

The reputation of the people of Cashmere is not good. Their character is proverbial. The following will indicate that such is the case: "If you meet a snake, do not put it to death, but do not spare a Cashmerie." "Do not admit a Cashmerie to your friendship, or you hang a hatchet over your doorway."

"Many fowls in a house will defile it,
And many Cashmeries in a country will spoil it."

I cannot give the data of these sayings, but it is to be hoped that they are the exaggerations of prejudice. The government is very Oriental and exacting in the matter of taxes, and the people are kept very poor. When the Punjaub became British territory Cashmere formed a part of it, and it was sold to Gholab Singh. To raise the necessary amount of rupees he founded a system of taxation, which endures to the present day. The great body of the inhabitants are Mahomedan, but the Government and the Rajah are Hindoo; hence another source of objectionable laws. A Mahomedan will eat beef, but the Hindoo law makes it death to kill the sacred cow. The follower of the prophet is allowed to eat fish, but the worshipper of the thirty-two million of gods will not permit the dwellers of the water to be eaten. As the reason of this last restriction is curious and illustrative, it should be told.

The first morning after arriving at Srinugger, my boatmen brought me some fish, and on talking with them they explained that they had been fishing by means of my name; otherwise, they said that they would be put in prison: no native dare fish on his own account, but the sahibs were an exception to this law. This law turned out to be a result produced by a belief in the doctrine of the Metempsychosis. When Gholab Singh died, the Brahmins declared that his soul had transmigrated into a fish; hence the law to save the rajah in his new state of existence from being hooked and devoured. When my boatmen brought me fish again I always made a pretence of being very particular, wanted to know if they had caught the Rajah, and expressed decided objections against breakfasting off the father of the present ruler of Cashmere and Jummoo. If "cold missionary" could have been added to this transmigrated Rajah, what a choice bill of fare it would have made! This association of ideas I could not explain to my boatmen; but whenever I made inquiries about the fish, a sly smile of satisfaction appeared on their faces, indicating that they were pleased at my ridicule of such an absurd law.

The trade of the country is very much fettered by the heavy taxes. At all the passes leading from Thibet there are custom-houses, where a large duty is levied upon the *pushm*, the fine wool from which the shawls are manufactured. This wool is all brought in from the countries to the eastward, and Cashmere owes its celebrity for shawls to its being simply the outlet of this product. There is also a

* The serpents are called in the ancient language the *nagas*; in Hebrew the serpent is the *nachash*.

† "A pure river of water of life, clear as crystal, proceeding out of the throne."—Rev. xxi. 1.

duty upon the shawls when they are sent out of the country. Tea comes overland from China by Thibet, and pays a heavy duty when it enters Cashmere. It comes in large square paper packages, and from its shape it is called "brick tea." It is in great demand among the more wealthy, and if you go to inspect the stock of the shawl merchants, while you are looking over his goods, he regales you with "the cup that cheers." In preparing the tea for themselves they put spices in it, but they have found out that the "Sahib log" prefers it without these condiments, and so they prepare it accordingly. The Nautch girls are very fond of this beverage, and always refresh themselves with it during their performances. The hookah is also an indispensable necessity; but this is not peculiar to one class in India: from a queen to a coolie they all "drink" tobacco. "Drink" is the idiom by which they express the imbibing of smoke.

During my visit to the Happy Valley, Colonel Seymour and Greatrex, of the Bays, arrived, and they determined to have a Nautch on a grand scale. One of their objects was to realize, partly for my benefit, the past times of Noormahal; and to accomplish this, it was to take place in the very building in the Shalimar in which Moore places the scene of his story. At the time there was only one copy of "Lalla Rookh" known to be in Srinugger, and it was in great demand for a couple of days before the Nautch. On the afternoon of that day I found myself sailing over the Dall, or lake, with General Van Cortlandt, who was the British resident for that season in Cashmere. Moore must have read up his subject most carefully, for his description of the lake is very truthful. He describes it as being "like a garden,"

> "With the rich buds that o'er it lie,
> As if a shower of fairy wreaths
> Had fallen upon it from the sky!"

The most striking feature is the lotus; it is a large flower, with rose-coloured petals, and a large round flat leaf, which generally lies floating on the surface of the water. They were at the time in full flower, and portions of the lake were entirely covered by them, so thickly, that the water was not seen, and it looked more like a field, or, as Moore expresses it, "like a garden," than the surface of a lake. The mass of colour produced by such a number of flowers is very fine, and for several evenings at this season the sunsets were particularly gorgeous. The sky made great efforts to rival the rose-coloured lotus on the lake; and the effort was not confined to the sky, the

> "Silent pinnacles of aged snow
> Stood sunset-flush'd,"

and the lower ranges of hills came out in strong crimson. I have seldom seen more beautiful sunsets than those which I saw on the Lake of Cashmere. Our way over the lake was past the "Isle of Chenars," as Moore calls it. It derives its name from the *Chunar* tree, a number of which grow on it. The ruins of a mosque are still to be seen on the island, which has a charmed look about it, from the unnumbered lotuses surrounding it. We pulled the leaves of the lotus, and used them as umbrellas; and when we could catch one of the seed-vessels, it was hauled on board. It is like a cone, base upwards, full of seeds, which are very like green peas, not only in size, but in taste. Finding them very tempting to the palate, we continued eating as we went along. The boatmen, seeing that these seeds were liked, helped us to all they could reach. We became veritable "Lotos Eaters," and were told that we should forget our own country. The reply to this was simple. "For such a place as Cashmere who would not send their own country to oblivion?" We continued to eat this fruit of forgetfulness. There may be something somniferous in the seeds, or perhaps it might be the heat, or the locality—a beautiful lake, along which we moved among flowers "like a garden," islands, trees, hills, snowy peaks "sunset flushed." No paradise could equal it. Who cared although the whole outer world might be forgotten in such a land of beauty?

> "Let us swear an oath, and keep it with an equal mind,
> In the hollow lotos-land to live and lie reclined
> On the hills, like gods together, careless of mankind."

We had attained to "Nirwana," we had reached the final state of absorption into bliss, which is the heavenly existence of Buddhism. The Mahomedan enjoys in the celestial regions a supreme exaltation, which he calls "Kief." When the Hindoo enters Go-lok—the heaven of Vishnu—he will enjoy a beatification, which he believes in as "Moksh." But the heaven of cows could not possibly surpass the moksh of the lotos-eater on the Lake of Cashmere. And who would run the risk of that dreadful bridge Al-Sirat, when Kief can be reached without walking on the edge of a razor? Let any man become a lotos-eater on that lake, and he will cease to have any doubts about the original site of the Garden of Eden. He will never attain to the true knowledge of good and evil till he has eaten the seeds of that plant. Who could refuse to eat such fruit, so pleasant to the eyes as well as to the taste?

Moore gives the following extract from Forster descriptive of the Shalimar:—

> "One of the Delhi emperors—I believe Shah Jehan—constructed a spacious garden called the Shalimar, which is abundantly stored with fruit-trees and flowering shrubs. Some of the rivulets which intersect the plain are led into a canal at the back of the garden, and flowing through its centre, or occasionally thrown into a variety of water-works, compose the chief beauty of the Shalimar. To decorate this spot, the Mogul princes of India have displayed an equal magnificence and taste, especially Jehan Gheer, who, with the enchanting Noor Mahal, made Kashmire his usual residence during the summer months. On arches thrown over the canal are erected, at equal distances, four or five suites of apartments, each consisting of a saloon, with four rooms at the angles, where the followers of the Court attend, and the servants prepare sherbets, coffee, and the hookah. The frame of the doors of the principal saloon is composed of pieces of a stone of a black colour, streaked with yellow lines, and of a closer grain and higher polish than porphyry. They were taken, it is said, from a Hindoo temple, by one of the Mogul princes, and are esteemed of great value."

The principal building in the garden at the present day has a verandah on two of its sides, and they are constructed of a black-coloured marble, with yellowish streaks; so it is probable that they are the "pieces of stone" to which Forster alludes. In the illustration of the Nautch these architectural remains are seen; the pillars, capital, and lintels are all of this material. The building is quite surrounded with the water of the canal, and a multitude of *jets d'eau* were playing, which produced a most refreshing coolness. We bathed, and had a combination of a swim and a shower-bath among these jets at the same time. We had dinner in one of the verandahs, and by the time it was over darkness had set in, and those employed in the Nautch had got the whole place illuminated. This is done in India in a very simple and effective manner, by a lot of small cups, called *chirágs*, into which there is a wick, and some oil. These chirágs were placed all round upon the lines of stone forming the quay of the canal, and the effect, with the jets of water playing between them, was very fine. At one spot they had placed some of these lights in little niches behind an artificial waterfall, so that they were seen through the water as it fell. This had a very fairy-like look about it.

Our friends had engaged all the best and most celebrated dancing-girls in Srinugger for the occasion, and they had all arrived. Each girl has her own baji-wallahs, or musicians, which attend her—generally about three performers. These, on this night, made a very large orchestra. We sat down at one end of the verandah, and while we had coffee and cigars the Nautch commenced.

I had repeatedly seen Nautches before in various parts of India, and I had formed the usual opinion of them, that they were dull, wearisome performances; but I must declare that the display of this evening was an exception to all that I had seen. The Cashmere music, instruments, and performers, are much more like our ideas of music than what one hears in other parts of India. No doubt but this had the effect of taking away the monotony which every-one complains of at such exhibitions. Add to this that the dancers had high claims to beauty; the women of Cashmere have long been celebrated. It has always been to the harems of Delhi what Circassia is to the seraglios of Constantinople. Many of the women are as white in the skin as if they had been born in Europe. "Goolee," the name of the principal performer of the evening, could boast of the roses on her cheeks. She was the Noor Mahal of the evening, and well she merited the title. I can never forget that night. On talking it over afterwards, we all confessed to have been under the same spell of enchantment. Perhaps it was the lotos-eating—or perhaps the good dinner which we had just disposed of produced the effect; perhaps it was the fairy-like effect of the place, with its fountains and lights. All was heightened by the music and the beautiful creatures moving before us. There were the associations of the scene; we had been imbibing the magic of "Lalla Rookh" on our way over the lake, and here was the very spot where, according to the story, the love-sick Noor Mahal had also been a performer, and sung

> "If there be an elysium on earth,
> It is this, it is this."

There were the houris of paradise added to make our "kief" complete and perfect. There was a delightful dreamy reality, with at the same time a feeling of abstraction about it. We had ceased to belong to the nineteenth century: we were away back at some distant period of time. Moore's story was realized before us; it was a waking, tangible dream. Had a jin or a genie appeared, no one could have thought him out of place. Had we been asked about the Arabian Nights, we would have expressed our perfect faith in the truth of the whole thousand and one stories. We were willing to believe in Ormuzed and Ahrimanes, and all their armies of angels. The Peris of Paradise were not a matter of mere faith—they were realities before us. The spell was complete, and acknowledged by the whole of our party. It is a good thing to be thus taken out of yourself—to cease to be, as it were, for the time; and I here again thank my friends for the sweet delusion of that never-to-be-forgotten night.

Dancing-girls seem to have belonged to all parts of the East, and were in existence in the most ancient times. They are the only class of women in the East who receive what may be called "education;" they have to begin when children, and are carefully trained. Every rajah keeps a number of them to entertain himself and visitors. In many parts of India they are attached to the temples, to sing to the god, and perform at the ceremonies; these girls are called "Moorlees." The Greek and Etruscan vases are familiar illustrations of dancing women at religious ceremonies. In the Bible we find that "Miriam the prophetess, the sister of Aaron, took a timbrel in her hand; and all the women went out after her with timbrels and with dances." The dance and the song always go together; the dance is a series of movements of the body, meant to express more fully the meaning of the words sung. It is suiting the action to the word. It is far more like acting, than our Western ideas of dancing. The feet are only used to jingle the bells attached to them. It would be difficult in a short space to give an idea of the songs which they sing; their character differs very much; they range from mere doggerel to the songs of Hafiz. There was a very favourite song called "Angrezzie mat balo beebee," which means "Don't speak English, Girl!" It would be difficult to explain why it was a favourite, but the same difficulty would be found to explain why many of the popular songs at home here are favourites. This particular one might rank, for poetic merit, with "Jim Crow;" and like that once celebrated melody, it could be easily altered by impromptu verses. The great favourite was "Taza ba taza," and it is really a fine song; it is by Hafiz; the ideas are good, and the words are musical. The refrain of it is an illustrative speci-

men of what seems the tendency of Oriental rhyme; the words are "Taza ba taza, nou ba nou," which means, "Fresh and fresh, new and new." The peculiarity is the repetition of the same sound, producing as it were, a rhyme within a rhyme; reminding one of that richness of effect which they produce by a repetition in their wonderful ornament, not only in architecture, but in shawls and all their gold and silver work. There is an oft-repeated verse from Hafiz, which will still further show this feature of Oriental rhyme. It is,—

"Hum jins, ba hum jins, purwàz;
Kubootre ba kubootre, bàz ba bàz."

By this repetition, every syllable seems to rhyme, and the style must be well adapted for lyric poetry. These lines may be translated as,

Kindred souls together walk:
Dove with dove, and hawk with hawk;

or, in the words of the old proverb, "Birds of a feather flock together."

SIGN-PAINTERS AND SIGNBOARDS.*

ALTHOUGH signboards, in these modern days, are very unimportant objects, time was (and that at no very distant date) when they were far otherwise. When streets were unnamed and houses unnumbered, when the majority of passers-by in even the busiest thoroughfares were unable to read, and when particular trades were grouped in colonies in particular localities, it was necessarily a desideratum to give every shop a name or token by which it could be distinguished and customers referred to it. Reading, as we have just remarked, being a scarce accomplishment, to write up the owner's name would have been of little use. Some, indeed, whose names offered the chance, advertised them by a rebus, such as the hare and bottle for Harbottle, and two cocks for Cox; a custom not uncommon in the days of the Romans, not only on signboards which were then in common use, but on the votive tablets of the dead. Others, whose names no rebus could represent, adopted the tools of their calling, or pictorial objects; and as the talents and imaginative powers of the artists were, it may be presumed, rather limited, colours were often introduced, in heraldic parlance, for a "difference." Size, quaintness of design, and costliness, were also eagerly sought after for the sake of distinction.

Of the sign-painters of the middle ages, we have little information; but about two centuries back, Harp Alley, Shoe Lane, and similar localities, appear to have been the head-quarters of these artists. Here Barlow, Craddock, and others, whose names are now forgotten like their works, had their studios, and produced some good signs, both carved and painted. A few signs, however (according to the *Spectator*), were produced by artists of a superior class.

The latter were often coach-painters, who united both branches of art. The panels of the unwieldy coaches of our ancestors in these days, as well as of the sedan-chairs then so much in use, were often a mass of costly blazonry; and when these herald-painters turned their attention to sign-painting, they generally produced something good.

Such was Clarkson, to whom Mr. J. T. Smith, the antiquary, assigns the beautiful sign of Shakspeare, which formerly hung in Little Russell Street, Drury Lane, and for which £500 were paid,—certainly a handsome price, when we remember the beggarly remuneration too often given for both artistic and literary work in those days. Such also was Catton (*obiit* 1788), who painted several good signs, particularly one of a lion, for his friend Wright, a famous coach-builder of Long Acre. This picture, after weathering many a storm, was still visible in J. T. Smith's time. A "Turk's Head," also by Catton, was long admired as a mercer's sign in Covent Garden. J. Baker (*ob.* 1771), who studied under the same master as Catton, and who was made a member of the Royal Academy at its foundation, J. Baptiste Cipriani, a Florentine coach-painter (*ob.* 1785), who also became a Royal Academician of London, S. Wale, R.A. (*ob.* 1786), who painted the celebrated Falstaff* and other signs, the principal one being a full-length of Shakspeare, about five feet high, which was executed for the door of a public-house in Little Russell Street. It did not hang long before it was taken down, in consequence of the act for removing signs and other obstructions from the London streets, and such was the change in public appreciation consequent on the new regulations, that the sign was sold for a trifle to Mason, the broker, in Lower Grosvenor Street, where it stood at his door for several years, until destroyed by the weather and rough usage. Lamb was another sign-painter of note, so also was Gwynne, originally a coach-painter, who acquired some reputation for his marine pieces. R. Dalton, Keeper of the Pictures of King George the Third, had been apprenticed to a sign and coach-painter, so also had Kirby, afterwards drawing-master to George the Fourth when Prince of Wales. Wright, the marine painter, Smirke, R.A., and many others might be also named.

Besides these, we have the "great professors," as Edwards calls them in his "Anecdotes of Painters," at the head of whom stands Hogarth, whose "Man loaded with Mischief" (a drunken wife, a monkey, and a magpie) may still be seen at 414, Oxford Street, where it has been for many years included among the fixtures in the lease of the premises. R. Wilson, R.A., painted the "Three Loggerheads" for an ale-house in North Wales, which gave its name to the village of Loggerhead, near Mold. George Morland, Ibbetson, and David Cox, executed a few works of this kind. Harlow is said to have painted a front and back view of Queen Charlotte for the New Inn, Epsom, to settle a score he had run up. The portrait was in Sir Thomas Lawrence's most courtly style, and signed in the corner T. L., Greek Street, Soho. When Lawrence heard this, he is said to have flown into a rage, and declared that if Harlow were not a scoundrel, he would have kicked him from one street's end to another, whereupon Harlow coolly remarked he trusted that, when Sir Thomas should have quite made up his mind about the matter, he would choose a short street. Herring is reported to have painted some signs—the "Flying Dutchman," Cottage Green, Camberwell, and the "White Horse," at Doncaster. Among others, Millais is said to have painted a "St. George and Dragon" for Vidler's Inn, Hayes, Kent; Horace Vernet, also, has the name of having produced more than one in his younger days.

So, also, in former times, eminent artists occasionally

* "History of Signboards." By J. Larwood and J. C. Hotten. London: Hotten, Piccadilly. 1866.

* Near the West Gate, Canterbury. The reader may remember the display of popular feeling caused by the removal of this relic a couple of years back.

condescended to these trifles. In the Museum at Basle are two paintings by Holbein, said to have been intended as a sign for a school. A Correggio in the Sutherland collection (Mule and Muleteer) is understood to have been painted for an inn sign, and a similar story is told of the "Bull" of Paul Potter* in the Museum at the Hague. Watteau painted a sign for a milliner, on the Pont Notre Dame, which was deemed worthy of being engraved. Many more examples might be given: but we must turn to the *signs* themselves.

The remains of Herculaneum and Pompeii present us with many of the signs in use among the Romans; thus, we have a goat, the sign of a dairy, a mule turning a mill, apparently that of a bakehouse; a boy receiving a castigation with a veritable birch, evidently denotes a school. Some of these were painted, but more frequently they were terra-cotta relievos let into the pilasters of the shop front. Another sign of which we have frequent notice in Latin writers is the Bush, whence we derive the proverb of later days—

"Good wine needs no bush."

It was usually of Ivy, a plant sacred to Bacchus. This custom was copied by our mediæval forefathers, and as late as the days of Taylor, the water-poet, a bush on a pole appears to have been one of the commonest indications of a tavern. Many examples occur in the works of Wouvermanns, and the custom is still occasionally resorted to in the backwoods of America and up the country in South Africa, where a bundle of straw or grass on a pole advertises accommodation for man and horse. In the Tudor days these erections were known as "ale poles," and appear to have been often very elaborately ornamented, as in the "ale stake" in front of the "Nag's Head in Chepe," in the prints of the entry of Mary de Medici.

The barber's pole is another mediæval sign, for both the pole and its use are figured in more than one MS. The patient who was to undergo phlebotomy had to grasp the pole to make the blood flow more freely, and as the pole was liable to be stained with blood, it was painted red. When not in use it was hung outside the door with the linen bandages round it, hence in later times it came to be painted with stripes of red and white, or blue and white. It was stated in a debate in the House of Lords, in 1797, that there was a statute then in force, requiring barbers to show a *blue* and *white* pole, and surgeons (barber surgeons) a similar pole, with a brass basin and a red flag or rag. The basin alone is still used for a barber's sign in Scotland, while in Holland the three gold balls seem a favourite device with the perruquier.

The three balls, now gilt, but originally blue, were a part of the arms of the Medici family, from whose states came most of the earliest dealers in pawns. Pawnbrokers appear, however, occasionally to have used other devices. Balls of various colours were used by dealers in medicine, fortune-tellers, and quack doctors, possibly from their resemblance to the divining crystals to which such magic properties were attributed. At night they used lamps of the same colour as the balls on their signs, whence most probably the red lamps of our chemists' shops. The true signs, however, were either suspended from an iron bar, or hoop† fixed to the front of a shop, or to a post or obelisk before it, or depended from a small triumphal arch spanning the approach. The ironwork in these cases was often very elaborate.

Coats of arms, crests, and badges, were used at an early period as signs. One reason for this no doubt was that, in the Middle Ages, the houses of the nobility both in town and country, when the family was absent, were used as hostelries for travellers. The family arms always hung in front of the house, and the most conspicuous object in the arms probably gave a name to the establishment among travellers innocent of heraldic lore, with whom a lion gules or azure would soon become the "Red or Blue Lion." We have examples of such a practice in old signs like the "Talbot" (the crest of the Talbots), the "Bear and Ragged Staff" (that of the Warwick family), and in family arms, as the "Beaufort Arms," the "Courtenay Arms," &c.

Sometimes the signs had a party significance. Thus, the "Red Lion" was a favourite badge of the Lancastrian faction, being the arms of Constance, the daughter of Pedro the Cruel, King of Castile and Leon, and wife of Henry IV. Hence its frequent occurrence in English coat-armour, hence perhaps also its popularity as a sign. In some cases, as our authors suggest, when combined with the Castle, it may have had no reference to heraldry, but have been a copy of the brand of Castile and Leon on the wine-casks, and used as an indication that Spanish wine was "to be had within."

The "White Hart," the "Falcon," the "Cannon," and many kinds of Lions, were all in their day royal badges; so were the "Swan,"* the "Greyhound," and the "Antelope." So also was the "Welsh Dragon," which seems to have been a favourite sign with apothecaries, possibly from its being the alchemistical sign for the drug mercury. The "Caduceus," under the name of the "Brazen Serpent," was a favourite sign with the booksellers of the sixteenth century, not only in England, but also in France and Germany, and thus often occurs as a colophon in old books. Crosses† were also in common use, probably from these emblems being the distinguishing badges of different knightly orders; thus, the Knights of St. John wore white crosses, those of the knights of St. Lazare were green, those of the Templars red, those of the Teutonic knights black.

Religious signs were very common in the fifteenth and sixteenth centuries. The "Virgin," which may still be seen at Ebury Hill, near Worcester, was a favourite sign. Taillemant de Reau speaks of a miraculous tavern-sign of the Madonna in the Rue Notre Dame, in Paris, which was seen to shed tears, and which was removed by order of the archbishop of Paris. Others of these old signs appear to *modern* notions to trench on the blasphemous, though examples of this kind may still be met with abroad. The early booksellers, whose trade lay chiefly in religious books, delighted in figures of saints; but at the Reformation, when the Bible became in great request, *it* appears to have become the popular symbol of the book trade. Adam and Eve, the Deluge, Old Pharaoh, Abraham's Offering, Balaam's Ass, and many other scriptural subjects occur as signs for various places in the sixteenth and seventeenth centuries, having probably been suggested by the old mysteries and miracle plays, which by the way were often reproduced in shows long after the Reformation. The "Salutation," so common—why we know not—in seaport towns, originally represented the angel saluting the Virgin Mary. It was changed by the Puritans into the "Soldier and Citizen." "Heaven" was a place of entertainment near Westminster Hall, on the site of the present Committee-rooms of the House of Commons. Pepys mentions in his diary having dined there in the winter of 1660. "Paradise" was another house in the same neighbourhood; and "Hell" and "Purgatory" were two underground passages or cellars.

The well-known sign of the "Man in the Moon" is supposed to have originated in a kind of semi-religious legend, and therefore requires a brief notice here. The idea is said to have been suggested by the incidents given in the Book of Numbers, xv. 32 *et seq.* Not content with having stoned the man, the legend also transported him to the moon. Other writers imagine that the legend refers to Cain, who was asserted by popular superstition to have been transferred to the moon. Whoever he may be supposed to represent, the man in the moon with his bundle of thorns, his lantern, and accompanying dog, has not only had a fair share of signboard popularity, but has been celebrated in innumerable songs.

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* Intended for a butcher's shop.

† Hence such signs as the "George (Saint) and Hoop," the "Mitre and Hoop," the "Cock and Hoop," "Hen and Hoop," &c., all of which we find mentioned in the fifteenth century.

* The Swan was used as an emblem of Luther, hence its occurrence in place of a vane on the steeples of Lutheran churches.

† Both the cross and the chequers were Roman trade-signs, the latter apparently for gambling-houses.

We must, however, now pass on to humorous and miscellaneous signs, selecting them at random from the curious and entertaining volume before us, which, though containing notices of nearly 2,000 signs, is still confessedly incomplete.

The "Pig and Whistle" was an old and favourite one. It is figured in the Harleian MSS. (fifteenth century), and still lingers at Chester, Macclesfield, Coventry, and other old towns. In one of the stalls of Winchester Cathedral, is a carving of a sow sitting on her haunches blowing a whistle while another plays a fiddle, close by a small porker is attentively listening to the maternal performance. A good deal of learning has been displayed in endeavouring to account for this device, some writers supposing the name to be a corruption of the "Pix and Housel," or of the "Pig and Wassail." Others claim for it a Dano-Saxon origin, "Pige-Washael," "Our Lady's Salutation." The Scotch also assert it to be their own, pig being a pot and whistle a name for small change. Possibly, as Mr. Hotten observes, it was after all but a freak of some mediæval artist, a remark which may apply equally well to the old Hampshire sign, the "Cat and Fiddle." Animals in boots appear to have been originally used by shoemakers, in Holland, where they are still common as signs. One may be seen on a tavern in Rotterdam with the following legend:—

"In den gelaars den ezel zeer kloek.
Verkoopt men tobak, brandewyn, en krapkoek."

"This is the valiant jackass in boots.
Here sell we tobacco, brandy, and gingerbread."

There is a Puss in boots near Dudley, and a Goat in boots in Fulham Road, Chelsea.

The "Good Woman," represented by a lady minus her head, was a figure much used by oilmen,* and is said to have originally depicted some decapitated female martyr, though since construed into a satire on the sex. The "Honest Lawyer," a gentleman of the long robe, in a similar predicament, is also recorded as existing. "Nobody" was the sign of Trundell a well-known ballad-printer. "No-place" may still be found in Plymouth, "No-where" on a public-house in Norwich, and "Why-not" on one at Essington, in Staffordshire. The "Hole in the Wall," so common in military towns, was probably a snug recess in the town walls, devoted to suttling purposes. It is also said to have been a round hole in the wall of the debtors' prison in the Fleet, through which they were permitted to receive alms, broken victuals, &c.* The "Toby Philpot," the authors explain by the following extract from the *Gentleman's Magazine*, December, 1810, which we commend to the notice of lecturers on "total abstinence."

"Died at Ewes farmhouse, Yorkshire, Mr. Paul Parnell, farmer, grazier, and maltster, aged 76; who during his lifetime drunk out of one silver pint mug upwards of £2,000 sterling worth of Yorkshire Stingo; being remarkably attached to Stingo, home-brewed, of the best quality. The calculation is taken at twopence the cupful. He was the *bon-vivant* whom O'Keefe celebrated in one of his Bacchanalian songs, under the name of 'Toby Philpot.'"

Those of our readers who are acquainted with the rural parts of the Isle of Wight may have noticed that the "Bugle" is there a common sign with wayside inns, and often associated with the figure of a *Bull*. This Mr. Hotten tells us is traceable to the old English word *Bugle*, applied to the wild cattle at one time plentiful in many parts of our Island. The letters of the alphabet from A to Z were, forty years back, the sign of a tavern known as the A B C, in Clare Market. "Great A" occurs as an inn sign in Norfolk. "Little A" was a tobacconist's in Leadenhall Street; Z, the initial of Zinzibar (ginger), was a grocer's sign. We have also the "Sneezing Cat," the "Flying Monkey," the "Ass in a Bandbox" (at Nidd, near Knaresborough), the "Hunchbacked Cats" (at Lille), the "Gaping Goose" at Leeds, the "Loving Lamb" at Dudley, the "Cow and Snuffers" at Llandaff, "Old Careless" at Stapleford, "Slow and Easy" at Lostock, "Spite Hall" at Brandon, "Old No" at Sheffield, the "Monster," the "World's End," the "World Upside Down," the "Finish," and many more. We must, however, ourselves make a finish in commending to the reader's notice the lines in Gay's "Trivia," which are still applicable to many an old-fashioned town, both at home and abroad,—

"Mark well the signs, for signs remain
Like trusty landmarks to the walking train."

* Possibly as having some reference to the Parable of the wise and foolish virgins, a favourite subject in the old "mysteries."

* The "Hole in the Wall" is the familiar name for the refreshment room in the House of Representatives, at Washington.

SOCIETY OF BRITISH ARTISTS, SUFFOLK STREET.

A WRITER in one of the daily journals has given great offence to the artists who exhibit in this institution; and they have reason to be offended. It is not the province of a critic in art to go at his work like a Red Indian, and scalp the feelings of the men whose works he chooses to attack. Criticism may be healthy enough without violating the laws of good breeding between man and man. It is an old saying, that "all the trees in the forest do not grow alike;" neither are all exhibitions of equal merit. There is only one Royal Academy; and the Exhibition in Suffolk Street does not pretend to be the royal favourite of Trafalgar Square. Still, the place contains some good works, and bears evidence of the labour of honest men; and the fact that such men are endeavouring to live by those labours, ought to disarm such tomahawk attacks as that to which allusion has been made.

It must be confessed that our ideas of the purpose and object of Art are a little uncertain at the present day. The principles of Art are quite as loose and unsettled as those relating to the doctrines, and rites of the Church, or to the constitution of a Reform Bill. It may be possible that religion, politics, and art are not unconnected; Ruskin has long held that such is the case, and it must be confessed that there is much to favour such an idea. It is this want of first principles which makes art-criticism so vague and unsatisfactory. Painters paint from the most opposite sets of ideas, and critics praise or condemn from equally contradictory points of view. Even Ruskin complains, and does so with a tendency to wailing, that he cannot restore this harmony of thought, which he considers so necessary for the full development of painting and architecture. When a Ruskin fails, who will attempt to produce cosmos from the chaos of our present ideas on art? If artists are to live, they must paint; and if artists paint, critics must give their opinions. The simple conclusion is in favour of forbearance. Where there is no infallible canon which we all acknowledge, let none of us individually dogmatize; and above all remember, that the painter's work is the bread-and-butter of himself and his children.

Having no universal church of art whose doctrines override everything else, we may be said to derive all the advantages which belongs to dissent, in the shape of almost infinite variety. Every mind seeks out in Nature its own shrine, and there presents through the labour of the mind and the hand the devotion of the heart. And our exhibitions are all illustrations of this diversity of feeling and

thought. The collection in Suffolk Street is not an exception to this rule. Every shade of thought is represented. Suppose that we notice the pictures with some relation to the various sets of ideas and modes of thinking which are prevalent.

The Allegorical has long been, and always will be, a welcome style. The countrymen of John Bunyan cannot object to that mode of art; and in the present exhibition there is a very clever water-colour—not much more than a sketch—of "A Wayfaring Man" (1029), by Miss F. Claxton; the wayfaring man suggesting the universal man, who is a wayfarer here below on this earth. Of the Ideal there are some examples; may witches be included under this head? If so, Mr. M'Culloch's "Tam O'Shanter" (116) might be noticed; the whirl and motion of that exciting moment when Meg passed the "Key-stone o' the Brig," is well conceived and effectively rendered. Historical subjects are plentiful and various. Mr. Heaphy's picture of General Fairfax and his Daughter (238) shows some good work; the principal figures are very good, and the foreground incident of the hen and her chicks, one of which is passing over the edge of the general's sword, suggests the position of danger which the principal figure is placed in at the moment. It is not easy to repeat the story of a picture by the subordinate accessories. A very little more finish and power in this picture would give it a title to high place. "The Beau's Stratagem," by E. C. Barnes (115), from its treatment belongs rather to the historical class than to what the French call "Sujets de genre." It is well painted and well done in every way, its fault being that it is a little too theatrical; Though much more satisfactory is his small picture to the lines from Tennyson (382),

> "Break, break, break,
> On thy cold grey stones, O Sea!"

This is really quite an original picture, all painted in greys with the exception of the shawl, which might be called only a deeper grey. The solitary figure standing by that simple beach raises an interest which is never felt in the larger pictures; one does not even see the lady's face, but *the desire to see it* is produced, and he would be a dull spectator who would only desire to see the face. A walk along a beach like that must be by one who has something to engage her thoughts, and to see the heart and to know its utterance is the sum of the interest produced by this strangely fascinating picture. The painting is simple and broad; the brush has left the colour thick and pulpy. To the right of this picture is a very fine one, in which grey is again the predominating tone (383), by Haynes King. So far as painting goes it might be said to equal the other, but the single figure excites little or no interest. Miss Beales gives a picture of this same class in water-colour (918), but if it had been a little less pre-Raphaelite in its treatment it would have been more effective. "Giorgione" (948), by J. D. Linton, is allied to this type of subject. One feels an objection to this picture because it does not belong to the English school of water-colours; the juicy quality of a free wash of colours is absent,—one has to look close, to see if it is not done with crayons; still, one must not overlook the fact that it is a very fine work, carefully and very beautifully done: the faces are masterpieces of delicate touching. There is no very distinct line between this class of picture and that of ordinary life subjects; the historical, sentimental, and everyday scenes, or rustic pictures, melt into one another, no line can be drawn; so the latter class may be considered as following to those just noticed. Mr. Hemsley's "Village Postman" (86) tells its story particularly well. Although rather a hackneyed subject, the picture is not so in the slightest degree. The action and expression of the young lady tells what she is expecting. Papa has got his letters, and is already deep into them; the relationship is indicated by the dog, who runs back to see what detains his mistress. The postman is a very good figure, and has an expressive face; a little more flesh-colour in the face, and a little more careful painting here and there, —painting which Mr. Hemsley evidently could do, —and this would be a first-class work. The critic is hard to please; one picture wants flesh-colour and careful painting, and the next has a little too much again of both these qualities: the middle course of perfection, particularly in art, is hard to attain. These remarks indicate the criticism Mr. Roberts's "Tedious Sermon" (33) is liable to. It might be a little less distinct, and the faces not so much cut out as they appear; still, this is a good performance, full of good honest work and study. The pictures by the Brothers Burr are so very much alike, in almost every quality, that what applies to one applies to both. They all indicate a masterly power and vigour; the touch is put on with that ease, indicating an experience of hand and correctness of eye, which is always so delightful to the lover of art. "The Rehearsal" (114), by J. C. Monro, although rough in its execution, contains many good points. "Never had no Larning" (430), by Mr. Hayllar, is an out-of-the-way subject to pick up, and a very good one it is; it is not every man that can catch a new idea to paint. The picture is very well rendered. A word of notice is due to Mr. Dowling, who is, so to speak, a stranger come among us, and gives "An Incident in the Siege of Gloucester" (566). "The Holiday" (558), by Miss Walker, is a pleasant subject, and the work upon it will stand a careful looking into. Over the fireplace in the large room there are a number of very beautiful little bits of painting; they are too numerous to particularize.

Suffolk Street has always been strong in landscape, and Mr. Pyne is what might be termed the Turner of the place. This eminent artist has generally been ranked next to Turner among British landscape painters, and some very generous marks of appreciation by the great master are recorded as having been given to his all-but rival. Landscape art has the two very opposite modes of treatment—the realistic and the ideal. Turner and Pyne have practised both. The one is the foundation of the other. In both Turner has been the greatest man; but in the production of light, and of light grey aërial effects, Pyne has always ranked next to the great master of English landscape painting. This power is still visible in the pictures which Mr. Pyne exhibits, but he is not what he used to be. Perhaps this is the result of accident; if so, all lovers of our own school of landscape will be glad. "Florence from a Villa on the Arno" (17) comes the nearest to the old style of this artist: there is light, delicacy, and power. Detail in the distance is not lost by atmospherical effect—it is a picture in which you can mentally walk from the foreground into the middle distance, and on to the hills beyond. Of the realistic school,—which almost all our landscape men are now, more or less—Mr. E. Pettitt's Avalanche (417) is a good example, full of careful study from nature: much of the detail is lost by being hung so high; but high as it is, one can see the minute finish of the middle distance and foreground, and we may take it for granted that the distance is equally so. A Steam Tug towing a vessel into Howth Harbour (424), by E. Hayes, is a very fine picture, the effect in the sky is glowing and expressive of atmosphere. On the Lledr (193), by J. Syer; the stream of light on the hill-side is finely felt and rendered; this artist has a fine, free touch, which is seen to great advantage in the rocks and water. Lime Burning (574), by G. Cole, is very effective, the blaze of light bursting out on the darkness, and its play upon the figures is most cleverly managed, and the result is a good picture, which has the additional merit of being out of the common. In the water colours, Mr. Soper has a masterly view of Brighton from the Dyke Road (984). The greys in this picture form its great charm, but the drawing and composition is of high merit. A Highland Raid (934), by A. C. Gow, has good action and clever painting. The Nosegay (973), by A. H. Marsh, indicates the true feeling of an artist, the hollyhocks and flowers are finely touched. Coming Clouds (1012), by W. F. Stocks, is a bit of poetic treatment.

Our space comes to an end sooner than our interest in the Exhibition, and we regret, therefore, that many an honest work, perhaps no less worthy than those we have mentioned, must perforce pass unnoticed.

MUSIC AT HOME.

THE gentle Orpheus, emancipated from his winter trance, once more strikes the operatic lyre, and declares the musical season in full progress. Philharmonics, "old" and "new;" Sacred Harmonic and Choral Societies, and all miscellaneous entertainments of sweet sounds, are very well in their way; but the "season," in the strictly conservative sense of the word, commences on the opening night at the Royal Italian Opera, or Her Majesty's Theatre, as the case may be. That all-important signal, the preliminary tap of the *bâton* on the foot-lamps, was given by Mr. Costa on Tuesday, April 2nd. Mr. Gye certainly began well with *Norma* for the inaugural opera, and Madame Maria Vilda as the Priestess. Of all the new comers in 1866, she alone made a strong impression, a result due to her superb voice and faultless singing, for in the matter of acting she was considerably below the standard. The clear, ringing, silvery voice, and the wonderfully facile execution, are here again; but the dramatic Norma is almost as far off as before. *Lucrezia Borgia* we may expect to see repeated, and the particular ordeal for the artist to pass through will be Leonora, in Beethoven's *Fidelio*, an opera included in Mr. Gye's scheme for 1867. Strange to say, Madame Vilda had no bouquets cast at her sandalled feet; and as those compliments are now so indiscriminately bestowed, she did not, perhaps, regret their absence. Two of the five gentlemen singers engaged for 1867 made their *débuts* in *Faust*, performed on the 4th. M. Petit, the Mephistopheles of the *Lyrique*, sings and acts with true French determination. He absolutely writhes before the cross-hilted swords which upset his demoniac composure; and he adopts all those attitudes expressive of defiance, bravado, and sarcastic contemplation, which are theatrically associated with the scarlet-clad emissary from the lower world. He plays with the transformed philosopher as the sleekest of cats does with a mouse; plausibly attentive to the ancient Martha, provokingly condescending to the lachrymose Siebel; and he defies the entire crowd in the market-place with contemptuous energy. M. Petit may be accused of exaggeration, but *n'importe*, M. Petit is picturesque, and able to thoroughly realize the meaning of the "Dio dell' or," and the serenade "La che fai l'addormentata." Signor Graziani's, or Mr. Santley's still fresher laurels, will not pale before the genius of Signor Guadagnini, who makes but a languid Valentino. *L'Africaine* introduced Signor Cotogni, another tuneful stranger, who has latterly been brought into excessive prominence by the success-mongers of Paris. He is, *pro tem.*, the swarthy Nelusko, who, with the adored and adorable Selika, sinks into the long sleep under the fatal Mancanilla tree. The manager has secured the privilege of bringing out in London M. Gounod's *Romeo et Juliette*, and Signor Verdi's *Don Carlos*. Mademoiselle Adelina Patti is to sing the "gentle Capulet's" sorrows; and Mademoiselle Pauline Lucca is to be the Elizabetta di Valois of M. Gounod. The exquisitely poetical garden scene in *Faust* has, of course, led us to expect great things of M. Gounod when he tunes his lyre to the strongest of all human passions—love. All remark upon the forthcoming opera would be mere speculation, but upon one point the thousand tongues of rumour seem unanimous, and that is, the omission of the balcony as designed by that wonderful dramatic architect who rests peacefully at Stratford-upon-Avon. There will be a Nurse, but to that "ancient lady," as Mercutio calls her, young Juliet will not cry "Anon, anon," and steal back to the balcony under which Romeo waits to speak his last good night. Signor Felice Romani, Bellini's librettist for *I Capuletti ed i Montecchi*, ignores William Shakespeare, and makes the lovers meet in the "marble halls" of the period. Musical curiosity is thoroughly awakened as regards Verdi's *Don Carlos*, and there is every opportunity for the composer to make another strong and enduring impression upon the English public.

The laws of human nature and the spirit of commerce decree that "two of a trade" shall seldom agree upon all points, but upon one Messrs. Mapleson and Gye are in sweet accord; they both predict that crowds of foreigners will cross the Channel, and tarry awhile in murky London. We certainly manage International exhibitions better than they do in France, little as we were disposed to admit the fact in 1862; and it may presently appear to the enlightened Hottentot, the Lapland connoiseur, the musical Maori, and other intelligent and unprejudiced foreigners "from all parts of the globe," that we are not behind the Gauls in the organization of our Italian Operas. Mr. Mapleson prints his voluminous prospectus in blue ink, and the blue-veined aristocratic spirit flashes through the document from end to end. Her Majesty's, once the "King's," Theatre, "instead of copying, still leads the way," says Manager Mapleson, therefore must a grateful world bow down before the Druidical establishment in the Haymarket, and look upon the stuccoed temple of Bow Street as nothing more than a musical mushroom. Like another "herald Mercury on a heaven-kissing hill," or like the bird of *la belle France* in full crow, may the faithful (in their mind's eye) perceive the manager of the "old house" revolving on its gigantic ventilator, and proclaiming to the four winds of heaven the services to civilization effected within the walls beneath. Chignoned beauties in the drawing-rooms of Belgravia the blest, and of South Belgravia, *née* Pimlico, will elevate their pencilled eyebrows when they read, in the document referred to, of George Frederic Handel's Italian operas having been given in the old theatre, burnt down in 1788; and will be equally surprised to find, that Rossini, as conductor of his opera *Zelmira*, held the *bâton* over the wife of his bosom while she played the leading part. Mr. Mapleson enumerates the composers and singers who have made or increased their reputation at Her Majesty's, and dwells, with pardonable pride, upon the fact of that fascinating creation, the Ballet, having been cradled in the old house. Candidly speaking, Mr. Lumley's bold successor, has striven hard and conscientiously in behalf of high art, and certainly has glorious traditions to fall back upon. Verdi's *I Lombardi*, near akin to a novelty after a sleep of fifteen years, is the opera for the first night, April 27th; and the announcement of *La Forza del Destino* is evidently intended as a set-off against the attraction of *Don Carlos* at the other house. Spontini's *La Vestale* is to continue the classic chain already commenced by *Medea* and *Iphigenia*. A young Swedish soprano, Mademoiselle Christine Nilsson, with a brilliant Parisian reputation, will try on the mantle of Jenny Lind here in London. With Mademoiselle Encquist, too, as a concert vocalist, the northern regions will not be badly represented.

A serious loss has fallen upon the musical world in the death of Alfred Mellon, at a comparatively early age. No orchestral conductor in this country, or elsewhere, had a more complete and intimate knowledge of all the great scores; and no man of the time was his superior in that indescribable tact by which large orchestras are held together, and full justice is done to the noblest compositions of the old masters. As a composer, Alfred Mellon was but little known; but as a really practical man, thoroughly versed in every detail of his profession, his name was a "household word." He was popular in every sense of the term, not only with the valse-loving public of the promenade concerts, but with amateurs of far more cultivated taste. With Alfred Mellon at the head of some most important societies, it was felt that we had a countryman as well, if not much better, able to conduct classical works than many foreigners whose names might be quoted. He worked long and perseveringly for the high position he was enjoying at the time of his death; and it will be long before the whole of the void he left will be adequately filled. He studied at Stuttgardt, under one of the strictest but best of masters, Herr Molique; and it is not perhaps generally known, that in his younger days he

played several operatic parts at the Birmingham theatre,—among them were Figaro, and that nondescript travelling nobleman of Bellini's *La Sonnambula*, the Count. The last concert he conducted was that of the Musical Society of London on the 20th of March, and the concluding item of the programme was the late Vincent Wallace's overture to *Maritana*. Precisely a week afterwards he died, and on the following Tuesday hundreds of musicians, literary men, and actors bared their heads as they stood by his grave in the Brompton Cemetery, and listened to the choristers singing funeral anthems.

The old Philharmonic Society has no longer the assistance of Professor Sterndale Bennett as conductor. At the first concert of the season, on March 11th, Mr. W. G. Cusins passed through the ordeal satisfactorily, and that, too, in the face of reasonable prejudice. The Philharmonic Concerts have hitherto been conducted by men known through their works, and it was unquestionably a great surprise to find such a young and comparatively untried man at the head of what is generally looked upon as the chief musical society of the metropolis. Every succeeding concert has apparently demonstrated that the choice of the Philharmonic powers has been judicious, and Mr. Cusins is to be congratulated on a piece of good fortune that seldom happens to so young a man.

Mr. Manns of the Crystal Palace has broken the ice in London, and, it is to be hoped, will frequently take up his proper position on the metropolitan platforms. On March 28th, he brought the now famous Saturday Concert Band to St. James's Hall, at the bidding of Mr. Arthur Chappell. The concert was chiefly remarkable from a faultless performance of Bach's Triple Concerto, for pianoforte, violin, and violoncello, by Mr. Charles Hallé, Herr Joachim, and Signor Piatti.

The Sacred Harmonic Society is in full and vigorous action, under Mr. Costa's direction. Mr. Benedict conducted his own "Legend of St. Cecilia," and has now witnessed its triumph in London as well as at Norwich and Liverpool.

The "Monday Popular" season closed on the 8th, and this final concert was signalized by a magnificent performance of Bach's Concerto in D Minor, for three pianofortes, entrusted to Madame Schumann, Madame Arabella Goddard, and Mr. Charles Hallé. The Winter Concerts at the Crystal Palace are stopped for the season. At the twenty-third of the unequalled series, two movements from an unfinished symphony in B Minor, by Schubert, were played for the first time in England, and no orchestra was ever engaged upon more exquisitely melodious and beautiful music. For most of our knowledge of Schubert we have to thank Mr. Manns, who certainly never did a greater service to pure art than in bringing these two "things of beauty" from a cruel obscurity into the strongest light. The "Grand Opera" Concerts are at hand, but for the partial consolation of those who feel severely the cessation of symphonies and great instrumental works, there are the newly organized Wednesday Concerts in the music room, where good things are played by the ordinary band of the company, and where it is intended that young soloists, both vocal and instrumental, shall constantly be presented to the public.

ANTICIPATIONS OF THE ROYAL ACADEMY.

IN our last, we intimated respecting the health of John Phillip, what all his friends had too fondly hoped to be true, that he was out of all danger, and so far on the way to health again, as to be at work on his Academy pictures. But before our words were published death had, in a manner, rendered them untrue; for he died on the 27th of February. A day or two before the sad event he had called upon his friend Mr. Frith, and, while in the studio of the latter, was attacked by paralysis; the stroke was so heavy as to render recovery hopeless from the first. John Phillip is now known by his celebrated pictures of Spanish subjects, so much so that he was called "Spanish Phillip." His *Chat round the Brasero* was exhibited last year; the *Young Murillo* was exhibited in 1865, and *La Gloria* in 1864. These were his very finest works, showing that the man was, as an artist, in his prime. It was intended to have sent two of the pictures which he had been at work upon to the Royal Academy, but this was found impracticable; so one or two other works not exhibited before will be sent. One of his last works was a portrait of Colonel Crealock: this he was so pleased with himself that he sent it as one of his contributions to the Paris Exhibition. Mr. Frith's great picture of this year is already historical. It was while consulting about its merits, and while giving that brotherly advice and criticism which even such masters of the brush are used to give and take, that the attack first seized Phillip. A week afterwards he was no more.

Frith's picture represents Evelyn, who describes in his diary that he visited Whitehall, and was amazed at the scene at court, and that *a week afterwards the king was dead*. Evelyn has entered, accompanied by two friends, one a man in the middle time of life, and the other younger. The day is Sunday, and before them is a picture of one of the worst periods, in point of morals, which the court of this country ever presented. Gambling is going on; the king is surrounded by the celebrated beauties of his time — the duchess of Portsmouth, and the Italian cardinal's daughter being most prominent—while some French musicians are playing and singing. The number of figures is very great, and after the eye has wandered about, admiring not only the beauty of the colour, drawing, and touch, but at the same time the beauty of the women, and the bright dresses of that period, it falls upon a carpet littered over by a number of dogs of the "King Charles" breed. Some of them are lapping milk from a silver dish, a number of very small pups are attempting to use their legs, which are yet feeble, —they have not got over the nine days which open the canine eyes. One of these blind pups has a prominence evidently meant to satirize the moral blindness of the monarch, whose name he bears. The portrait of the king is beautifully painted; but perhaps the most telling point is Evelyn, who stands gazing at the scene, evidently impressed with deep emotion.

Elmore's picture will illustrate the passage in Luke,—"That which ye have spoken in the ear in closets shall be proclaimed on the housetops." It is still a custom in the East for the women to gather on the tops of the houses, where all the scandal of the place is retailed; and when any one has got a *bonne bouche* of this kind, the hands are clapped as a signal for the other gossips to come and hear those personalities which human nature everywhere seems to delight in. As this is a picture which illustrates a scriptural text and a characteristic of the East, Mr. Elmore has not limited himself to any particular locality or period of costume. It is the East, and that is enough. The view of the housetops, all white and shining, is something quite new, and most beautifully managed. Mr. Elmore's power of painting the figure, particularly the female face, is such that it requires no laudation from us.

Mr. O'Neil's picture of the way Titian spent a leisure hour, is a very happily conceived subject. He is in a barge with some friends—ladies and gentlemen—and in the distance may be seen the well-known features of Venice, which point out the locality of the scene.

The other picture, an incident in the life of Luther, represents him as a monk, and a very young man; so that

we have not the fully developed face which we are familiar with as that of the great reformer. Under the ecstacy of his devotions, he is reported to have swooned; on trying to get to his assistance, it was found that the door was locked; so that force had to be used, and the mouk who came to his assistance, knowing Luther's love of music, called in the chorister boys, and made them sing a favourite chant, which had an almost miraculous effect in restoring consciousness. This is the point taken for the picture, and it has been most admirably and honestly worked out.

Mr. Faed has again been distilling sentiment out of the every-day life of the humbler spheres of society; and with his usual success. When hung in the Royal Academy, few will pass the figure of the tall blind man without a touch of sympathy. What the fisherman and his wife and children evidently feel, the spectator of the picture is also, by the artist's power, made to feel. Such a result is a high achievement of art.

Mr. E. M. Ward has a picture of *Juliet and the Friar;* this with his *Amy Robsart* of last year would indicate that he has made a change in his class of subjects. It is right that a lady should select heroines for her pictures, and Mrs. Ward has selected this year Joan of Arc. Creswick will have a number of pictures. Ansdell has a very large canvas, the subject of which is "Shipwrecked Friends," the friends being a sailor and a handsome Newfoundland dog; there are, in this picture, some sea-gulls very finely rendered, which will delight all lovers of the deep. He will also have three small Spanish and Scottish subjects. Millais has a picture of *Jephtha's Daughter*, the fine qualities of which are much talked about. Mr. Maclise will have two subjects from Shakespeare, scenes from Othello and Richard the Second. Mr. Goodall sends a subject picture of Rebekah, and a figure—life-size—of Rachel. Mr. Horsley's principal picture will be "The Duenna and her Cares." Mr. Cooke vibrates as usual between Venice and Dutchland. Mr. Nicol finds a vent for his Irishman this season at a Railway Station. Mr. Calderon has sent a large picture called "Home after Victory," from the times of the civil war. Mr. Yeames also sends a large contribution called "The Dawn of the Reformation." Mr. Armitage has two pictures. Mr. Pettie has a subject called "Treason," and Mr. Watts life-sized picture of Eve. The President sends full-length portraits of the Duchess of Sutherland and Lord Stanley.

Rumour has it that the coming exhibition will be more than usually attractive. There are a great many works, not only of promise, but of ripe fulfilment, by the men whose number is too large to be included in the body of the Academy.

The hanging committee for this year is composed of Cope, Lewis, and Richmond. As it is generally supposed that the "hanging committee" perform the whole of the onerous duty of selection, as well as hanging, it may be information to state that such is not the case. There is a "council" of eight, with the president of the Academy as chairman; and all the works are submitted to them. They divide the pictures into three classes, "Accepted," "Doubtful," and "Rejected," and the initial letters of these potent words are chalked on the back of each. The hanging committee then commence their labours, and their function is the placing of each picture upon the walls. The council meet a second time to inspect the exhibition, and they have the power to affirm or to change the positions allotted by the hanging committee; the "Doubtful" class being held as a reserve to fill up space or to substitute in case of need for subjects not acceptable to the final tribunal.

MICHELET'S "L'OISEAU."*

SHOPS have their memories, as well as the woods and fields of our youth; from the humble village sweet-shop to the pompous undertaker's. Few who have had any dealings with the latter can ever pass his door without a shudder. But the memories connected with many other shops are of a more mixed character. A hard-faced man will sometimes halt at a toy-shop, not to purchase, nor yet to recall his own days of rocking-horses, but to stare at some sixpenny doll with a look that must puzzle the young woman at the counter. Memories, in short, are seldom gay. We have just brought a fit of the dumps upon ourselves, by recalling our first pleasant visits to Messrs. Hachette. We have to reckon the time back by births and deaths; and it seems strange that it should only be seven or eight years ago. We were then attracted to the window, no doubt, by the powerful Dantesques of Gustave Doré. But what enticed us up to the counter was a simpler picture book, a tale about the mishaps of a little girl (*Malheurs de Sophie*), by the Comtesse de Ségur. It was a good florin's worth, and helped us to make French amusing to a young scholar. Our nursery soon became stocked with the rose-coloured library (*Bibliothèque rose*), and a volume of the Children's Week (*La Semaine des Enfants*) twice made a happy New Year's gift. The books are still on our shelves, not without their memories; and, before we began to offer a formal welcome to another much more important issue from the same firm, we could not help stopping to say a word in favour of our old favourites.

Let us now turn to the book immediately before us. It is an eighth edition of *L'Oiseau*, by Michelet, illustrated by H. Giacomelli. The name of this young artist is not entirely new to us. The pages of the great French Bible, now in progress, are divided into double columns by his ornamental designs; and these exhibit as much invention, in their own way, as the cartoons of Gustave Doré himself. But Giacomelli is more than a bold and fanciful decorator; he can do more than study leaf and flower, and arrange them in tasteful folds and clusters; he can put life and character into living creatures. He is a sort of French Bewick among the birds; and his pencil can render the cruel grace of a watchful falcon, or the busy bee-like flutter of a humming-bird. He gives us many a picturesque episode. Here we see a rush of herons upon a wild autumn wind; there we meet a desperate owl, abroad in the daylight, hunted and dizzied by the clamorous crows. His favourite scenes are meadows, or wayside brooks, or cottage gardens, with their sparrows and finches; or the coppice of the nightingale, or the grove of the woodpecker; and all their varieties of herbage and foliage are detailed with charming fidelity. He has also a good eye for landscapes of broader effect, whether the marsh of the bittern, or the eyry of the eagle; but for these we must refer our readers to the book itself. The whole series, we are told, will soon appear in a new English edition, about to be published by Messrs. Nelson.

We have chosen our two larger specimens (the second of which will appear next month) from the scenes in the hedgerow; and we may here express our thanks to Messrs. Hachette for kindly having placed them at our disposal. Master Blackcap, it will be observed, is not in his most impassioned mood; he is not pealing forth those ecstatic strains of courtship, which have often made him called the lesser nightingale; he is only cheering his mate with a little quiet melody, as she bends over her nest to brood

* "L'Oiseau." Par J. Michelet. Huitième édition, illustrée de 210 vignettes sur bois, dessinées par H. Giacomelli: Paris: Librairie de L. Hachette et Cie. 1867.

once more upon her treasures. She will press her soft breast upon them, feeling a strange pleasure in the pain, till she can hear a faint chirp within them; she will help her chicks, one after another, to break through the shell, and then Master Blackcap will have four or five more mouths to feed. All this, we are apt to assert, is known only to our human selves; and we complacently repeat the lines of Gray,—

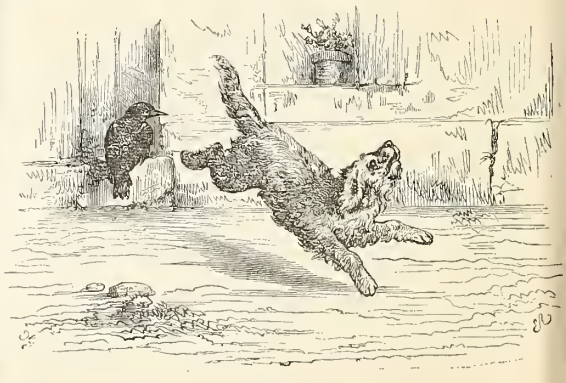
"'Tis man alone that joy descries,
With forward and reverted eyes."

But some animals must enjoy pleasures of memory, or else the dog would not "hunt in dreams," and so let us allow that the brooding bird may, in her turn, enjoy pleasures of hope. The notes of her mate, too, may convey more than a blind thrill of consolation to her, during her long hours of watching. We are not clever enough to understand his song, any more than we can understand the debates of a rookery. But if one observes a great community of rooks breaking up in the morning, after caw-caws of every variety of intonation, and following their several leaders to the right and to the left, whilst others remain at home to guard the nests, one can hardly doubt there being many meanings in a caw. As for ourselves, we hold that a bird's language consists of much more than a love-note or two, a call-note, and an alarm note. Surely the gentle pair before us are looking forward to their joys of hatching and rearing; and we cannot see why they should not be holding some sort of converse about them.

Michelet's book is an eloquent rhapsody on the bird, its place in creation, its beauty and song, and its services to man. He naturally begins *ab ovo*: and our specimen bears the heading of his first chapter, "L'œuf." In the next chapter he treats of the first development of the wing. At its threshold the artist has placed the unshapely icebergs of the Antarctic pole, streaked with sharp white fantastic outlines; the barriers of a primæval world, sentinelled by solemn spectres in the form of birds. These are the penguins,—*bird-fishes*, as the author calls them, that have stretched their fins into scaly dwarf wings, and all to no purpose. In this solitary realm of ice they look gigantic and imposing; but they are poor harmless creatures. Further on we see their northern cousins, the Great Auks, watched by two sly Arctic foxes. They may easily escape, if they are near the sea, and unencumbered; for, though lubberly birds, they are still able-bodied fishes. But we should tremble for the fate of a poor mother-bird, such as we see on another page, squatting gravely, with her young one, just as gravely squatting, between her ungainly feet. They both seem to be plunged in thought, and would take some time to shuffle off a yard or so. The penguins are of various heights, from 1 foot to 4 feet. The tallest bear an absurd resemblance to short-legged gentlemen in long white waistcoats. One might suppose them, says our author, to be near relations of their neighbours, the seals; whom they rival, not by any means in intelligence, but at least in good nature. When they first beheld man, they looked at him with placid wonderment, and never thought of moving away from him. The sailors returned the stare, almost as ignorantly, though not quite so innocently. At their first glimpse of the penguins, ranged on some sandy island, they had taken them for a row of charity-school girls in white pinafores. They soon taught the poor scholars their first lesson, the fear of man.

From birds with mere flappers we turn to a bird which is nothing but wings. Michelet describes a stormy night on the Atlantic. "But the black weather begins to clear," (he continues); "day returns. I see a little speck of blue in the sky. Happy and serene region, which has been at peace, up above the storm. In this blue speck, at the height of ten thousand feet, floats a slight figure upon enormous wings. A gull? no, for the wings are black. An eagle? no, for the bird is small. It is the daring voyager that never furls its sails, the Frigate-bird. With a body hardly larger than a dunghill cock's, he stretches out his wings over a span of 14 feet. Such a bird, so sustained, has nothing to do but to let himself be borne upwards. The storm comes, and raises him into the calm ether. The poetical metaphor is true of him, and him alone,—he sleeps upon the storm." His bill is powerful, but his feet are weak, and partially webbed. He could not fight the eagle, but he could defy any pursuit. He can cross the Atlantic in a day. Yet he is not without his cares. His hard eyes are restless, as he sails about, watching for his prey. He can dart upon the fish like lightning; but his feathers will not bear much wetting; so that he cannot plunge under the waves, like the Gannet. He has one resource: he makes the Gannet work for him. When the latter (*poor Booby*, as the seamen call him) rises with a herring in his bill, his master often swoops down on him, strikes him, makes him let go his hold, and snaps up the fish before it falls into the sea. Giacomelli has drawn two figures of the Frigate-bird: the one perched on a rock, with his wings in a short interval of repose; the other rushing over a surging moonlit sea, in the full "triumph of the wing."

Michelet very properly rebukes the Frigate-bird as a bully; but he absolutely mouths when he comes to the downright bird of prey. One day, says he, in examining an anatomical collection, he came across the model of the head of a viper. He was scandalized at Nature: she had so carefully provided her hideous child with the means of killing. There was not only an armoury of pointed and poisonous fangs, but a magazine to supply the broken ones. Almost equally painful, he continues, are one's impressions when one examines a bird of prey. His beak may strike death home at once; but his talons too often fix a writhing victim, which dies with a prolonged agony. The vulture, indeed, frequently becomes a respectable member of society, for he turns scavenger; but the cagle, Michelet concludes, is only fit to figure upon the banners of emperors, and other brigand chieftains. He is a fitter emblem for them than they may imagine; for he is by no means a type of true nobility. He whets his iron beak upon the timidest and meanest of animals, the hare or even the mouse; and he drives his young ones abroad, sometimes before they are well able to cater for themselves. The raven meets with more grace from Michelet. True, he is naturally a bird of prey, and he was the emblem of the old Northern war-god. But he can make himself at home with the modern citizen; and he displays a fund of grave humour. We will pause for the present, after telling a short anecdote of him. There was one at Nantes, says Michelet, who used to console himself for his broken wing by playing tricks upon the dogs. He would sit on his door-step, looking up and down the street. Wretched mangy curs might go by as they pleased. But whenever he saw a stately hound, or a sleek lap-dog, he would pounce right on the animal's back, and give him just two good digs with his beak. The dog would slink off, howling and crestfallen; and then Ralpho would resume his seat with an air of satisfaction, as grave as ever, and looking quite incapable of engaging in such a facetious pastime.



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REVIEWS.

The Rail and the Rod; or, Tourist Angler's Guide to Waters and Quarters Thirty Miles round London. By Greville F. (Barnes). London: H. Cox, 346, Strand, W.C. 1867.

THE little work before us is exactly that which it professes to be, viz., "A Tourist Angler's Guide." It is the first book of a series, and contains much highly useful information as to the various fishing stations to be found on the *border lands* of the Great Eastern Railway, between London and Waltham, together with the railway fares, distances, places of refreshment, boundaries, club charges (day and annual), description of water, fish, and a host of other matters of equal interest and importance to the brethren of the gentle craft.

It is, we are informed, the author's intention to furnish the public with a "Wander Book," of the same description, for all the lines of railway leading from metropolitan din, smoke, bustle, and restlessness, to the margins of pleasant streams, where the speckled golden trout leap; to still, deep, shady pools, where the greedy pike lurks in ambush among the waving rushes and tufted reeds; and to where the weary son of toil may woo Nature in her most choice and attractive garb, drink in fresh air and new life, hear the soaring lark sing, inhale the perfume of sweet hedge-flowers, and when the day of pleasant relaxation is at length ended, find his way safely and expeditiously back to the struggles and turmoil of this work-a-day world, all the better for the trip, refreshed and re-invigorated. "Greville F.'s Guides" cannot fail to be received as a most acceptable addition to our sporting literature.

Elijah the Prophet. A Poem, by G. Washington Moon, F.R.S.L., Author of "The Dean's English." Third Edition. London: Hatchard & Co., 187, Piccadilly, 1867.

WE once met an Englishman, an author of remarkable talents and strong poetical feelings, who scarcely knew Elijah by name. His childhood had passed without his ever hearing how the ravens fed the prophet by the brook Cherith. He had himself used the phrase of the "still small voice," but its peculiar beauty was half lost to him, for he knew nothing of the context,—that passage of marvellous sublimity. To such a man a fine modern poem on Elijah might have proved a sort of revelation; but it would be hard indeed to find a poet equal to the theme. Mr. Washington Moon has, this time at least, been tempted out of his proper sphere; he has essayed the almost hopeless task of expanding the grand old prose into Spenserian stanzas. Fine specimens of bathos might easily be selected from any of the twelve cantos, but the honest enthusiasm of the preface disarms us. We admit, moreover, that the author is now and then seized with a transient fit of inspiration: on these occasions he generally breaks loose from the trammels of the Spenserian stanza. Our readers must be satisfied with one example,—the description of the chariot and horses sent to translate Elijah:—

"Ethereal, yet visible; for bright
Unto intensity through purest light
Indwelling, was that chariot of the skies.
The horses, too, were creatures not of earth;
Their necks were clothed with thunder, and their eyes,
Starry with beauty, told of heavenly birth.
No harness fetter'd them, no curb nor girth
Restrain'd the freedom of those glorious ones;
Nor traces yoked the chariot at their heels,—
It follow'd them as planets follow suns
Through trackless space in their empyreal courses;
For lo! the fiery spirit of the horses
Was as a mighty presence in the wheels,
And in the dazzling whirlwind which behind them flew,
And caught Elijah up as sunlight drinks the dew."

TO A SWALLOW.

From the Danish of Wilster.

I.

LITTLE Swallow, whom the summer brings,
Thou hast travell'd from afar so long:
Whither wilt thou go, to rest thy wings?
Whom wilt thou enliven with thy song?

II.

Round about the meadow art thou wheeling,
Where the buds are bursting into bloom:
Doubting where to hang thine airy dwelling:
Half a stranger in thy native home.

III.

Yonder, through the tender lime-tree leaves,
Seest thou not a low and narrow door?
Nestle there, beneath the cottage eaves;
Twitter there, till summer-time is o'er.

IV.

Never need thy brooding heart be beating,
Though a lattice open near thy nest:
Thou wilt only hear a voice repeating,—
"Where the swallow builds, the roof is blest."

V.

Speed thee,—speed upon thy winged ways;
Seek the roof above yon cottage door:
Then, if there thou bringest happy days,
Oh, how I shall bless thee evermore.

H. W.

IN A REVIEW, in the columns of the *Builder*, of Mons. Daly's "Revue Générale de l'Architecture et des Travaux publics," we find notice of a most interesting communication to that editor from his countryman, M. Perrin, General in the Siamese Army and Mandarin of the third class there. Our subscribers will be pleased, probably, to observe how the imposing illustrations of the Siamese architecture in our recent review of Mr. Fergusson's great work may serve also for the description given by the gallant general. We therefore extract the passage from our contemporary.

"He says that none would believe the numbers of marble monuments, temples, palaces, columns, and staircases at D'Ancor-viat. 'I assure you, believe me or not, that the most celebrated of ancient or modern monuments are but barracks near those I have seen here; our palaces, our basilicas, the Vatican, the Colosseum, are dog-kennels by the side of them.' Marble was the material of all around. The natives informed the general that these magnificent ruins covered an area of ten leagues by twelve. He asks, 'What city can this be? Of what empire was this the capital? I have seen temples in a good state of preservation, except the vegetation that has encrusted them, which do not measure less than a league around. They have forests of marble columns; the whole is of marble. All the walls are sculptured and ornamented. The first effect these monuments produced upon me was stupefaction. I wished to enter a temple which appeared well preserved. It had eleven flights of steps, and I know not how many flights each to arrive only at the first of the five peristyles!" Recovering, the general ascended the steps that led to a high tower, and then he asceuded the tower, and thence surveyed the ruins, where he saw marble enough upon the ground, and below the ground, that could rebuild, in the fashion of giants, all the cities in the universe.

"The educated natives know not to whom to impute this ruined city; notwithstanding that their literature goes several centuries back further than ours."

NATURE AND ART

June 1, 1867.

FALCONRY IN THE OLDEN TIME.

IN the olden days of "merrie England" the royal pastime of hawking was the sport, *par excellence*, of the upper ten thousand. No knight renowned in chivalry armed for the tournament with greater zeal than that with which the English noble, in the reign of "gentle Jamie," prepared to test his skill in falconry. It was a pleasant and right manly sport, and, according to the chroniclers of the olden time, was most often sought for in the woods of Tottenham and the marshy lowlands surrounding Muswell Hill. It is a sport now nigh forgotten, but at one time how absorbing! With what enthusiasm the old writers linger on the subject :—

"I count my toil and traivale but a game,
I deeme the days not long or spent amisse,
If so I may unto my fancy frame
This book of mine, which all of hawking is;
Than which there can be found no better blisse,
In my conceit, to such as love the glee,
And force the fields where bravest pleasures be."

Thus, in the year of grace 1611, spoke quaint George Tuberville, a man who could not only tell a hawk from a hernsaw, but who was a very adept in the gentle sport of falconry. His book of "Falconrie, or Hawking," published by Purfoot, of London, is a perfect gem, black-lettered though it may be; every particular worth knowing is there recorded, and recorded in a style which marks the keen sportsman as well as the intelligent observer. Tuberville mentions seven kinds of falcon—the Gentle, the Peregrine, the Barberie, the Gerfalcon, the Sacer, the Laner, the Tunican; and goes on to say, "Among them all, for her noblenesse and hardy courage, and withal the franckness of her mettell, I may and do mean to place the falcon gentle in chief. She is called gentle from her courteous conditions and fashions." The gerfalcon is described as a bird of great force, a gallant hawk to behold, strong-armed, fierce and hardy of nature, and difficult to be reclaimed. "A gerfalcon will look to have a gentle hand kept on her, and her keeper to be courteous and full of patience." The points of a good falcon are also minutely described: —"A full black eye, with large lids; a round head, somewhat full on the top; a short thick beake, blew as asure; a reasonably high necke; barbe feathers under the clappe of the beake; a good large breast, round, fleshy, strong, hard, and stiff-bonded, for she gageth her breast most at her encounter." How happily the same bird is described by Virgil :—

"Quam facilè accipiter saxo sacer ales ab alto
Consequitur pennis sublimem in nube columbam,
Comprehensamque tenet, pedibusque eviscerat uncis;
Tum cruor, et vulsæ labuntur ab æthere plumæ."

Thus rendered by Dryden :—

"Not with more ease the falcon from above
Trusses in middle air the trembling dove,
Then plumes the prey, in her strong pounces bound—
The feathers, foul with blood, come tumbling to the ground."

The "staying" power, to use a sporting phrase, of a high-bred hawk is almost incredible. It is confidently asserted that 150 miles have been traversed on the wing within the hour, and that 100 is a common performance. During these long flights much protection is afforded by the peculiar formation of the eye, which is provided with a thin, half-transparent fold of skin, called the "nictitating" or winking membrane, which serves to clear the surface and protect the vision from the sun. Their length of life is also remarkable, if we may believe the statement that, in 1793, a venerable falcon was found at the Cape of Good Hope adorned with a golden collar inscribed with the royal name of "Gentle King Jamie," and dated 1610. Although this bird had reached his 184th year, he is stated to have been strong and vigorous.

Many curious anecdotes are related by Tuberville and others as to the peculiar habits and strange customs of the falcon. We may select, as the most wonderful, if not incredible, that which is recorded concerning the hawks of Norvega, and which certainly marks them as the most conscientious birds of prey. It is stated with much solemnity that, at

the close of a long day's sport in winter, these provident creatures invariably preserve alive the last bird which they have taken, in order that it may serve to keep their feet warm during the frosty night. When morning comes, with a rare sense of the justice of the maxim "one good turn deserves another," they not only set their captive free, but mark well the course he takes, so that they may not hunt in that quarter again and by accident return evil for good.

Notwithstanding all that has been written about the art of falconry, grave doubts still exist on a very important point. How does the falcon deal the *coup de grâce* to his quarry, when stooping? Is the blow vertical or oblique? dealt with the front or hind talon? The best-received opinions seem to be in favour of the latter mode of despatch; and certainly the formation and calibre of the hinder talons favour the idea: the "*pedibus uncis*" of Virgil is also highly descriptive. Another point in dispute is whether the heron ever impales the falcon on his sharp upturned beak, the idea being that it has not sufficient tact to practise such cunning fence. Old prints, however, such as that of "How to flye the Hearon according to Martine," show the heron confronting the hawk with both beak and claws, which favours the idea that the latter sometimes shares the fate of merry Die Vernon's favourite Cheviot.

It may be regarded as conclusive that the sport of hawking was first introduced by the Saxons during the fourth century, and that in process of time the birds became of great value. We read how, in the time of Edward III., a hawk was held to be of such value that a holy bishop excommunicated a sinner for stealing one which he found perched at Bermondsey. During the middle ages, also, they were considered as a badge of rank, and were much loved by the nobility, who were wont to take them to church; not always, however, with impunity; for we find Sebastian Brandt, in 1485, complaining that "the whole church was troubled by their outrage." In our present age of wealth and extravagance, we listen with wonder to such prices as £2,500 for a "yearling;" but is not that quite eclipsed by £1,000 for a cast of three hawks, a price by no means uncommon in the time of my Lord Orford. That nobleman kept up a regular and expensive establishment for his birds. He allotted to each hawk an attendant, and sent them to travel during the moulting season; and their average cost to him was about £100 each per annum. This, however, sinks into insignificance when we read of the princely style with which the sport of hawking was carried on in the Celestial Empire, There, according to old Marco Polo, the emperor was wont to go forth with 10,000 falconers, 1,000 men to watch, called "toscaors," and 5,000 gerfalcons; each bird having a tablet of silver on his feet inscribed with its owner's name; and surrounded by this grand array the mighty potentate reclined in his costly chamber, covered with cloth of gold, fondling his twelve gerfalcons, each one of priceless value, and each attended on by a noble of high degree. A book more curious even than Tuberville's is "The Book of St. Albans," written in 1481 by Dame Juliana Berners, the noble prioress of the monastery of Sopewell. This lady loves to dwell upon the most minute particulars. She shows how the young hawks ought to be taken when they become "Branchers;" how they should be blindfolded, so as not to injure them; how they should be cast off and reclaimed; and how their true breeding may be determined by their mounting mid-air in a succession of small circles until the quarry is o'ertopped, and the fatal stoop may be accomplished. Gervasse Malcolm, another of the ancient writers, who calls the sport "a princely and most serious delight," admonishes the readers "to gaze at hawks with a loving and a serious eye, so that they become familiar."

At all periods, and in every country, the hawk appears to regard the heron as his common prey. In the "Speculum Mundi," written at Cambridge in 1635, Sir John Shaw says, "The heron is a large fowl that liveth about waters, and that hath a marvellous hatred to the hawk, which hatred is duly returned." And what sings Somerville?—

> "Unhappy bird, our fathers' prime delight,
> Who fenced thine eyrie round with sacred laws;
> Nor mighty princes did disdain to wear
> Thy waving crest—the mark of high command—
> With gold and jewels, and bright gems adorned."

Then, indeed, the heron was a royal bird, held sacred; he is now no better than a proscribed outcast, dear only to the painters, who love to aid, with his gaunt form and ashy hue, the dim solemnity of evening lights and silent pools.

Henry VIII. loved sport right well, and built a palace for his falcons. In his reign the hills of Hornsey and valley of Tottenham abounded in game of every description, and were the scene of many a royal hunting party. How easily may the splendour of such a scene be pictured! The noble cavaliers and beauteous dames of England, each with a band of retainers clad in the bright Lincoln green; and the anxious falconer encouraging his birds and keenly watching for the quarry. Then fancy shows us the stately heron resting on the marshy low ground, musing, as it were, over his bygone greatness; then, suddenly becoming aware of danger, slowly expanding his enormous wings and seeking safety in flight. And now the woods resound with the ringing, "La la sensa!" "Leigh ho!" "Leigh cass!" as the unhooded falcon is cast off in quick pursuit. How they wheel round and round each other in successive aërial circles, each striving to mount the higher. The heron at length, as if wearied, takes his course straight up; while the falcon's instinct teaches him that the circle is the slow though certain path to victory. Now for a moment both birds float poised in mid-air, as if husbanding their strength for the final effort. One instant more, the sunbeams glance brightly on the falcon's azure neck, as arching it prepares to strike, and then the fatal stoop! Such was this princely pastime in the olden days.

ON SKETCHING FROM NATURE.

By Aaron Penley, Professor of Landscape Painting at the Royal Military Academy, Woolwich.

No. XI. STUDY OF STONES ON THE NORTH SIDE OF TALIARIS, NEAR LLANDILO, SOUTH WALES.

THERE are few details in the foreground of a picture of more value to its effect than detached groups of stones, large or small. In no other objects do we find greater diversity of colour, although composed of the same material; and it is quite true that, although masses from the parent rock lie side by side, yet each and all vary in tint to an extraordinary degree. This offers us every desirable change of tone whereby our foreground can be enriched; and groupings of stones are no less valuable for the introduction of colour than for the distribution of light and shadow; for, being often the medium of some concentrated light, they become, as it were, the key-tone or focus of a whole drawing: this, however, will depend greatly, or, I should rather say, *entirely*, upon the character of the subject. The introduction into a scene of large stones (fallen or surface stones) should always be the result of knowledge as to their possibility of getting there; and I mention this from the fact of their sometimes being a kind of stereotyped adjunct to a foreground, quite irrespective of the geological character of the site. This is an error so common, that the artist can at once detect between a truthful sketch and a tricky deception practised by a tyro. It matters little what the subject may represent, if there be a strict adherence to reasonableness throughout, without bringing into notice any foreign objects totally at variance with the scene. Nothing shows greater ignorance than this; and I feel it would be an omission on my part, where I not to give a word of caution against so great an error.

The group of stones given for our subject is a part only of a sketch drawn and coloured on the spot. It will be found to combine variety of angular forms, and much diversity of colour, as well as great force of light and shade. In drawing groups, or even single stones, of this description, great attention should be paid to the general outline, and the several angles which are presented to secure an appearance of a broken surface and of stone-like fracture. In almost every instance there must be a crispness of edge to each part, without softening or melting of one into the other. However slight the washes may be in the lightest parts, yet they must all have clear and decided edges. Indeed, if they do not, the consequence will be a semblance to dough or putty instead of to stones. It is also of great importance that the breakage of divided portions should be properly and very attentively cared for, inasmuch as this is peculiar to each class of stone.

In a subject so local as this I have selected, I shall not enter into minute detail as to its stages of progression, but would remark that the principal thing to be observed throughout, is to leave the whole of the lights clean, sharp, and well defined. To effect this, a true pencil outline is imperative; without it there cannot be a successful result. As regards the colouring, the student must determine those parts that are warm and those that are cold, that is, which tones are inclining to the yellow, orange, red, lake-purple, or blue-purple, to grey or blue. It is only by a true balance of each that agreeable impression can be made, so that it is to be hoped this matter will have some consideration before commencing with the colour. The sky is produced simply with COBALT and a little LAKE. The light tints on the stones are obtained with YELLOW OCHRE, BURNT SIENNA, LAKE, and COBALT, in different proportions, agreeable to the tint required. All the shadows are done with BURNT SIENNA, LAKE, and INDIGO, varied,—and a little GAMBOGE introduced where the deepest touches are seen, because it causes the other colours to hold out with greater power from its being a natural gum and having a glossy quality. The herbage is of a mixture of GAMBOGE, BURNT SIENNA, and INDIGO, more or less of one than the other, and LAKE introduced upon the indications of heather. The top of the hill and the small loose stones must be coloured in with COBALT and LIGHT RED, and the short grass of yellowish tone is of YELLOW OCHRE and BROWN PINK, and in the greener parts a little INDIGO added.

The foregoing instruction will be found sufficient to enable the learner to copy with accuracy the subject before him. I have introduced it into the pages of Nature and Art for the purpose of giving an insight into the manner of portraying masses of fallen stone, thinking the season for sketching from Nature is coming on, when many will seek for converse with scenes of beauty, grandeur, and interest.

I take this opportunity of giving an extract from a letter received from a subscriber to Nature and Art, and I do so to clear up any misapprehension that may be felt by others upon the same point.

"Sir,—May I, as one of the numerous admirers of your sketches in Nature and Art, be permitted to call your attention to a want in your instructions which I fancy must be more or less felt by a great number of those who seek for instruction from them? I allude to manipulation.

"In looking at the 'copies' one is struck with the effect produced by innumerable dots or specks overlaying the flat tints, sometimes of the same, but not seldom in other colours. No allusion is made to this dotting in the letter-press, and the student is left to wonder whether the same effect is expected to be arrived at by flat washes (no mention being made of other *modus operandi*), and if recourse is only had to this treatment of the subject, in order to supply some defect in the matter or manner of painting."

The "numberless specks" referred to arise from the fact of the several tints being obtained from a point of lithographic chalk instead of by flat washes put on with the brush. It is a defect that cannot be entirely overcome, where there is any gradation of tint to be given; so that where they are seen to exist in a sky or elsewhere, they must be regarded as meaning to convey the idea of so many flat tints, and should be copied simply as such. There is, however, an improvement even in this; and I am constantly impressing upon the mind of the artists who copy my drawings upon stone, how requisite it is that this granular character should be overcome, it being likely to mislead those who are desirous of profiting by the several studies presented to them.

I have thought it as well to bring the above remarks before the readers of NATURE AND ART, in order to remove any false impression they may have entertained upon the subject.

A REMINISCENCE OF THE PYRENEES.

IT fell to my lot some time back to spend nine or ten months in the midst of the Pyrenees. And not content with pursuing the beaten track of tourists, and visiting spots well known to all travellers in that delightful region, I was resolved, if possible, to get a glimpse of some of the wilder and more inaccessible passes which are familiar to those only who dwell in the neighbourhood, and are reported to be grander and more beautiful than those usually visited. In the month of July an opportunity offered. A party was made up for chamois-hunting. The "*chasse aux izzards*," as it is called in the Pyrenees, is a frequent source of occupation and profit to the hardy mountaineers on both sides of the frontiers; and those visitors who are not daunted by some little danger and a good deal of fatigue, and who enjoy an excursion where they can for the time at least shake themselves free from the restraints and conventionalities of civilization, would do well to avail themselves of such occasions as may offer.*

The *izzards*, however, are generally very wild, and growing every year scarcer, so that it is very possible to go out many times into the higher ranges without ever being rewarded even by the sight of one. The two great desiderata to secure are, 1st, a really experienced hunter who knows the haunts of these animals; and, 2nd, a sufficient number of thoroughly painstaking *traqueurs* who will carry out the directions of the hunter. All the Pyrenean watering-places furnish excellent guides for ordinary excursions; but something more than a mere guide is necessary for izzard-hunting.

The party on the occasion in question consisted of a Midlothian laird, an English clergyman, and a Mons. de G., who were to join two French officers already in the mountains on a similar expedition, with Baranne, an excellent *chasseur*, who was engaged for both parties. We left St. Sauveur at six o'clock on a glorious July morning, on horseback, and rode to Cauterets for breakfast, which the landlord of the Hôtel de France furnished in excellent style. By the way, it may be well to remark that, in almost all French towns, there is a Hôtel de France, and that in almost all cases it is found to be good. At Cauterets, which is one of the best hunting-quarters, we met our guides and *traqueurs*, and held on our way on foot through the wonderful scenery to the south-west of that place, by the baths of La Raillère to the Pont d'Espagne, a route well known to all Pyrenean tourists for its picturesque beauty. Up to this point a large number of those who had breakfasted with us at the table-d'hôte of the Hôtel de France accompanied us, but they now turned off to the south-east, towards the Lac de Gaube, the largest of the Pyrenean lakes, situated at the foot of the Vignemâle, one of the highest peaks of the range. We turned across the Pont d'Espagne to the south-west, along the mountain path leading to Panticosa. The scenery is beautiful beyond description—rich in the luxurious foliage of the south. Acres are covered with rhododendrons now in full bloom, with a dark-green background of pine forests, above which the mighty granite peaks tower bare and jagged to the clouds.

On emerging from one of the long stretches of forest, we were strangely reminded of home by the sound of the bagpipe, which seems to be indigenous to most mountain districts; but here it is a very feeble instrument compared to its big brother of

* The identity of the *izzard* with the chamois of the Alps has been disputed by some naturalists; but on no sufficient grounds. They are evidently the same animals; the differences are so slight as to be accounted for by the variation in climate. The izzard weighs on an average about 45 lbs. There are two methods of hunting it. One is stalking, as in Scotland, and this, from the nature of the ground, is very difficult and fatiguing, and much more uncertain than the other, in which the shooters are posted in favourable spots, and the *izzards* are driven towards them by *traqueurs*. If the sport be pursued in the winter or autumn, the game is found much lower down on the hills, and the fatigue is much less. In the summer you have more settled weather, and perhaps better chance of game; but you must be prepared for severer physical trial, both from the greater height you must ascend, and from the intense heat to which you are inevitably exposed.

our northern hills. As we reached Marcadaou—*i.e.*, the shepherd's hut which goes by that name—the mist came on very thick, and the air struck damp and chill as we halted half an hour for a meal of goat's milk and bread; and it was felt that it was time to push on, if we were to reach our resting-place for the night before dark.

Leaving the Panticosa road to the right, we now struck off nearly due south, following the course of the Gave, a river on the left. It was an ascent all the way; vegetation grew more scant, and soon neither rhododendrons nor pine forests were to be seen, but in their stead huge boulders of rock, with here and there a grassy spot, affording scanty herbage for the goats which form the chief wealth of the mountaineers. The valley seemed to terminate in a *cul-de-sac*, with no apparent egress; and no vestige of a dwelling, not even of a hut, was visible. Here, however, was to be our camping-place for the night. The guides pointed out as our nest a hole formed by two masses of rock, with another which had fallen from above resting upon them as a roof, the entrance in front blocked up with a few rough pieces of timber. It was a queer place for a night's lodging, but it was the best, for it was the only one to be found. A dinner, however homely, is always welcome after such a climb as we had had to our mountain cave; and as soon as we had discussed this needful refresher, we were not sorry to stretch our weary limbs on the platform of rock, covered with an old cloak or two, which made our bed. But, alas for sleep or comfort! those same cloaks swarmed with fleas, and proved one among many enemies to repose.

At eight, P.M., while discussing some goat's milk and bread, we were joined by Baranne and the two French officers, who had been out hunting all day without success. These made up our whole party to about fourteen, and closely packed we were in the miserable hole that formed our refuge from the cold. Sleep is not easily won in such uninviting quarters; but in spite of fleas, in spite of the perpetual jabbering patois of the shepherds, who arrived one after another and proceeded to cook their evening meal; in spite, too, of the smoke from the fire, which found vent only by a hole in the natural roof, we did manage to get an hour or two, if not exactly of sleep, yet of rest; and at daybreak, about four, A.M., a wash at a spring which gushed from the rocks just behind our cave, soon freshened us for another start. Now we got a clear view of the scene, which the last night's mist had partially concealed, and a wild one it was, not unlike, though on a smaller scale, to the well-known "Chaos" near St. Sauveur.

It was nearly five o'clock when we got fairly off for the spot where we were to await the *izzards*. Our course lay nearly south, directly across the mountains, towards Panticosa; we soon came upon what to me was a new feature—the glaciers. Hard as stone, and slippery as glass, to cross them is no child's play. Every step must be cut with a hatchet, and the feet planted firmly in the holes; the whole party move in single file, and, when there is danger of precipices or crevasses, are lashed together with ropes. There was but one of these ugly features on our route; the glacier here was almost perpendicular, and at its foot was a half-frozen tarn, into which we must have inevitably rolled if we had made a false step. However, this obstacle safely surmounted, we passed directly afterwards from France into Spain, by a small *brêche* in the mountain wall, which bounds the two kingdoms. From this spot a most magnificent scene opened on our view: in wildness and savage sublimity I have never seen it excelled, and rarely equalled, even in the Alps. In front of us, some three or four miles across, and perhaps seven or eight in length, lay an elliptical valley, shut in by a serrated wall of rock, which looked at a distance almost like a battlemented fortalice. This valley was entirely snow, containing within its area no less than seven frozen tarns. Beyond the crest of the encircling peaks, to the south, stretched four ranges of mountains loftier still, some black with pine forests, others like the waves of the sea, tipped with white foam, and others, again, bare jagged granite peaks, gradually melting away into the hazy plains of Arragon, towards Zaragoza.

Traces of *izzards* had been found all along our track, but no game had been seen as yet. After pausing awhile to gaze on the wonderful scene around us, we pursued our way cautiously downwards into the snowy valley beneath; and now, a signal being given by a hunter on the heights above us, that *izzards* were in sight, all were instantly ensconced behind the rocks; but the game went off to the left, and we saw them ascending a glacier, and disappearing through a *brêche* in the granite wall which formed its boundary. As soon as all trace of them was lost we toiled on, till we came upon a few rocks rising like an island out of the sea of snow; here we bivouacked and breakfasted. Another half hour's climb brought us to the rocks which Baranne had pointed out as a suitable place of concealment. Here we waited four terribly long hours, a period more trying, if anything, than the time we had occupied in our ascent; for now the sun was high in heaven, and the heat was overpowering. There was no possibility of shelter, and we soon began to find our faces blistering and our eyes growing almost blind with the intolerable glare. We began now to think of retracing our steps, when suddenly seven or eight *izzards* came bounding across the glaciers towards some rock in front of us, but as yet far out of gun-shot. The *traqueurs* here made a great mistake, and entirely spoiled our chance of killing an *izzard*. Instead of descending, one on the right, the other on the left of the game, they both came down the same glacier on the right side, thus leaving the left open to them; if they had done as they ought, the *izzards* must have been driven to pass directly in front of the rocks where we were posted, and in all probability within rifle range. In consequence of this error on the part of the *traqueurs*, the game escaped by a lower glacier, and made off by the side of one of the tarns to

the top of the mountain, whence they had been scared.

On this unsuccessful termination of our *chasse*, we made the best of our way back—a process not so easily effected as described; it was, however, somewhat easier than in the morning, for the sun's power had now melted the surface of the snow, and we were enabled to get a footing more readily. It took us an hour to reach the *brêche* into France, during which I missed my footing once, and shot like a sky-rocket about forty feet down a glacier, happily without any other inconvenience than the trouble of having to retrace my steps. On passing the highest glacier we lost sight of our friend, Monsieur De G., who was completely knocked up, and remained in charge of one of the guides. Meanwhile E. and myself, with another guide, walked on as fast as we could to Cauterets, which we reached at half-past seven, P.M., having left our post on the Arragon mountains at half-past three, P.M., thus accomplishing in four hours a distance of at least twelve miles over glaciers and rocks, by a most fatiguing road for the greatest part of the way. Thus ended our "*chasse aux izzards*," in which, if unsuccessful in killing game, we had the satisfaction of seeing the animals in their native wilds, and were amply repaid by the magnificent scenery through which we passed, and the pleasing excitement which broke the monotony of a usually uneventful life.

THE DESERTS OF PERU, AND THEIR WEALTH.

By William Bollaert, F.R.G.S., &c.

THOSE who in youth have traversed and hunted in the Pampas or the Llanos, ascended to the high table-lands, and explored the deserts of South America, become attached to those regions. I must own to the fact, that I have an affection for the *Despoblados*—the uninhabited and uninhabitable deserts—having resided in and about those of Peru in particular for some time.

I have already in "Aspects of Nature in Peru,"* and "The Flower Spots of the Desert,"† adverted to desert matters, but principally of a local character. In the present I purpose to treat the subject of the Peruvian deserts in some detail, and endeavour to give an account of the more salient objects of interest found there.

The term desert is a general name for rainless, stony, and sandy regions; the hopelessly barren tracts across them are known as *travesias*, and when entered upon for the first time, produce a profound sensation of melancholy on the European traveller.

The whole of Peru is traversed in its length by the Andes, a portion of one of nature's colossal walls running from the Arctic to the Antarctic; formed by huge upheavals of igneous matters, and which still show their signs, in the numberless dormant and active volcanoes, jutting boldly out of the Cordilleras. On their flanks repose stratified rocks, once horizontal, but now heaved up. On the east, in Peru, are the more gently descending lands, stretching to the Amazons and Plata; westwards are the narrow, abrupt, and broken slopes, which, as they approach the coast of the Pacific, show extensive lines of desert plains, and high escarped and dangerous rocky shores. In a general section from west to east, large districts of mountain ranges rise directly from the sea, in which gold veins are occasionally found. The siliceous rocks, by their disintegration or wasting away, are the prime sources of the sands of the deserts: then come the porphyries, which contain copper veins. The wearing away of this latter rock gives rise to another sort of débris. The long-continued scorching heat of a tropical sun; the air, particularly when impregnated with saline matters from the sea, and occasional dews, are the destructive agents of the rocks.

On various parts of the coast the dioritic, and perhaps granitic, and porphyritic rocks have broken through the argillaceous limestones and other strata: in these silver is found in veins, as well as in nodules of all sizes in the breccia of the argillaceous limestones. On the sea-coast are observed many sandy shelly plains, some of them entirely made up of shells, of species now living in the ocean there; thus showing that these are plains of elevation, and not of very ancient date; indeed the process of elevation is going on. In some of these plains the shelly deposit is many feet in thickness, and it is quarried, calcined, and used as lime for building purposes. Where I have observed such very large quantities of dead shells in these probable plains of elevation, I could only find but very few live ones on the shores washed by the sea. Have the shell-fish migrated in consequence of the region having been disturbed, say by earthquake elevatory action?

Here and there rather large collections of bones of the whale are found on the shores of the Pacific, some much above high-water level. My old friend and fellow-traveller, Mr. George Smith (of Inique), tells me that near the port of Junin, N. of Iquique, he lately found bones of whales at an elevation of more than fifty feet above sea-level, and buried under ten or twelve feet hard, rocky débris. On the margins of some of these shelly plains, and where

* "*Intellectual Observer*," December, 1862.
† "*Intellectual Observer*," April, 1863.

sea-water may percolate, or get into hollows, ehemieal changes go on rapidly, and mueh sulphate and earbonate of lime and other salts are found. When the sea-water is left in hollows and splits amongst the rocks, solar evaporation causes the deposit of sea-salt. At Huacho, 11° 8′ S., large quantities are formed and exported.

When we pass these mountains of the eoast, particularly in South Peru, we come upon extensive table-lands, from 3,000 to 4,000 feet above the level of the sea. Sueh a one is the extensive Pampa de Tamarugal, in the Province of Tarapacá, where we find so mueh eommon salt, nitrate of soda, and borate of lime. However, here the saline bodies, I suppose, have found their way by percolation with water, from the volcanic Andean regions, where there are immense plains eovered with salt (the salt most probably of voleanic origin), one of whieh I saw stretching from 19° 30′ S., for about two degrees of longitude, and to near the mines of Potosi.

In the desert, from the port of Islay in 17° S., to the eity of Arequipa, a distanee of 90 miles, the sand is mixed with a white dust, in all probability thrown out of the volcanoes in that district. The deeomposition of the trachyte of the valley of Yura and Arequipa, yields sub-carbonate of soda, used in the manufacture of soap. Each 5,000 square yards of soil is valued at £200, and every six weeks a harvest of sub-carbonate of soda is reaped. Between the port of Arica in 18° 28′ S., and Taena, there is a desert of 50 miles across. On examining the sand here, I found it to be made up of small but perfect crystals of quartz, whieh shine brilliantly in the sun. What is curious is, that there are apparently no quartzose roeks in the vicinity of this desert. Can these crystals be voleanic?

On the route from Tacna to Arequipa, between Locumba and Moquegua, it is reported that numerous recent marine shells are seen in the sand, and this track is some considerable distance from the sea and mueh above it. At Paita, in 5° 5′ S., I notieed cliffs which are from 300 to 400 feet above sea-level, eomposed of horizontal layers of sand containing shells, and was informed that as far as twenty-four miles inland similar arrangements of sand with shells were to be met with.

I have been deseribing localities along the desert eoast of Peru, and a few leagues inland. Nearer or farther we come to the real bases of the Andes, and having arrived at a certain elevation, we find vegetation between mountain ranges, which diminishes as further altitude is obtained. We traverse the passes of the Cordilleras, and deseend slightly into the high table-lands, or the Thibet of the New World, where we find many lakes, ineluding the large one of Titicaca, surrounded by rough pastures. During the summer months, nearly every day after meridian, there is lightning and thunder, with, at times, rain, hail, or snow; whieh eause the ravines to convey water to the lower country. Hereabouts spring up the mighty mountain masses of the Ilimani and others. Continuing in an easterly direction, we descend to the wondrously wooded and pasture lands that stretch off towards La Plata and Brazil.

We eome now to the other great element, namely, the atmosphere: we may say, that the laws of the winds are the bases of the distribution of sterility and fertility.

The warm tropical winds or trades from the east are moist, and, blowing against cooler land, they deposit their moisture in rain; eonsequently, the eastern side of South Ameriea is the moist side, and the western the dry; a very great extent of its coast being completely desert. However, in the winter season in Peru, the gentle north-west winds from the Pacific bring some little moisture to the land. Ameriea generally is said to be the forest eontinent, and where there is some lack of moisture, there are the great pampas, llanos, and prairies; where the winds are still dryer, there are the deserts, as those of California, coming south to Peru; the whole of its eoast is in this state; in the north is the extensive desert of Sechura, in the south that of Ataeama.

Dana well observes that the great truth is taught us by this air and these waters, as well as by the lands, that the diversity about us is an exhibition of perfect system. If the earth has its barren ice-fields about the poles, and its deserts no less barren towards the equator, they are not aceidents in the making, but results involved in Nature's seheme from its very foundation.

Sand, then, is comminuted roek of any kind; but common sand is mainly of quartz; thus, according to its loeality, it forms sand-bars, sand-drifts, sand-hills or dunes on sea-shores, and moving sands of deserts; it is of this last form that an illustration is offered.

The rainless eoast of Peru* consists of a line of deserts from near Tumbez in the north, to the river Loa in the south, a distance of some 1,500 miles. The same eharacteristics belong to the eoast of Bolivia, comprising the coast of the great desert of Atacama, whieh extends into the north of Chile. The width of these deserts are from a few miles to sixty or eighty, as the branches of the Cordilleras approaeh or reeede from the shores of the Pacifie. Were it not for the stupendous baekground whieh gives to every other object a eomparatively diminutive outline, the sand-hills might often be called mountains. One sueh example may be seen in the rear of the town of Iquique, in 20° 12′ S., which, when surveying the distriet with Mr. George Smith, we called "The Elephant," its outline having something the appearanee of that animal. This long line of sterile eountry is intersected by small streams, the distanee between whieh is seldom less than twenty, and in one case is a hundred and twenty geographical miles. The narrow slips on the banks of a stream are peopled in proportion to the supply of water, resulting from the little rain and the melting of spare quantities of snow and ice in the Andes. Under the Incas the system of irrigation by lengthy aqueducts, and

* See General Miller's Memoirs.

manuring with guano, was carried to great perfection, and the population in these desert places was more considerable than at present. Between the streams are the *Travesias* or real deserts, where neither bird, beast, nor reptile are seen; where, in all probability, a blade of vegetation never grew, and where the only indication that the desert has been trodden before, is an occasional cluster of human bones, and the remains of beasts of burden which have perished. When the traveller becomes fatigued, or his animal jaded, he dismounts, and if the sun shines, he spreads his poncho between the fore and hind legs of his mule, and lies down underneath the only shade to be obtained in the shrubless waste.

In some places the deserts are thickly studded with *Medanos;* these are mounds of sand raised by eddying winds, that extend their influence several leagues from the mountain ridges. The *Medano* is in the shape of a crescent; the interior face is at times very many feet in height and nearly perpendicular, the outer front sloping like a glacis, and the horns diminishing to a fine point. Whatever may be its dimensions, it always assumes this form, until, upon approaching nearer the line of mountains, it gradually loses its symmetry. The *Medanos* from their repeated shiftings create a labyrinth extremely irksome even to *vaqueanos* or guides, who have no clue by which to direct their course, and it is not an uncommon occurrence for the most experienced to lose their way.

My old and esteemed friend, the late Col. C. Wood, of the Chilian army, on the occasion of the retreat of the patriot forces from before the Spaniards, in 1823, became separated from his party, and was lost for two days and a night amongst the *Medanos.* He had neither food nor water for himself or horses. He informed me that he did not suffer much for want of food, but the want of water to quench his burning thirst was intolerable, producing at last a dying-like torpor. The first day he pushed on rather rapidly in and out of the sand-hills, ofttimes dismounting, and climbing to the summit of one; when at the top, there were higher ones in advance and all around. Night came on, when he took up his quarters. He travelled about slowly the second day, leaving to the sagacity of his horse his extrication from this dilemma, until, fortunately, about night-fall, he arrived at Ica.

In my journals for November, 1826, I find it noted that a sailor about twenty-two years of age, calling himself "William," arrived at the silver mines of Huantajaya, in the province of Tarapacá, where I was then stationed. He had run away from his ship, an English whaler, the *Mary*, or the *Warrens* of London, which had put into the port of Iquique. His ship had sailed without him, so we took him into our employ, when he informed us that before he went to sea, he had been a waiter at the "Green Man and Still," in Oxford Street. On the 30th November he went with two mules from Huantajaya to the mines of Santa Rosa, situated in a high mountain in sight of the former place, returning safely. On the 4th December, 1827, he was sent with a note from my companion, Mr. Geo. Smith, to Santa Rosa. He did not return as was expected, and on the 6th we received information, that it was supposed he had run off into the interior. Nothing more was heard of him, until 1845, when his skeleton was discovered at some distance from the track between Huantajaya and Santa Rosa, and in the pocket of his waistcoat a reply to Mr. Smith's note. I have been somewhat particular in giving these details, which have but lately come to my knowledge, as it is possible this may be the first information the friends of "William" may have of his untimely fate.

Two persons employed at the nitrate of soda works were lost in the neighbouring desert, one a Mr. Blackadder, going from the port of Pisagua to Iquique, a distance of about forty-five geographical miles, the other a Herr Wagen, going from Mejillones to Camiña.

I am obliged to my friend, Mr. George Smith, for the following extracts from his journal of January, 1863. He had left Iquique for Mejillones in search of a new port, between that place and Pisagua, for the embarkation of nitrate of soda produced at his refineries in the interior.

The dangers and difficulties encountered by Cateadores, or mine-hunters, or other explorers and travellers in the countries under consideration, will be understood by the incidents detailed:—

"15th January.—Mariano Oviedo and my son William came down the *cuesta*, or mountain track, leaving the animals halfway; I, in the mean time, had arrived at the bottom, on the very rocky shore, before them, and had examined the locality, appearances of the anchorage, and landing, both of which were very bad. On an elevation some hundred feet above the water there was room for only one establishment.

"On returning to our *pascana* (resting-place), we heard the cry of '*Mi ahago*' (I am drowning); and on looking around, we saw our guide, Antolin Barreda, some hundred or more yards out at sea. At the moment, we knew not what to do, and the only chance of saving the poor fellow's life was to try to carry out to him the end of a number of *sogas*, or woollen ropes, tied together, taken by force from an Indian we found amongst the rocks loading some donkeys with guano.

"El valiente Guillermo* (William Smith), volunteered to swim out to him, dragging the sogas along the surface of the water. He did his task in masterly style, and reached the man within a few feet, when we found to our horror that the sogas were at full stretch. I had the end on shore, which I held over the sea beneath as far as I could reach, without falling over the cliff into the sea. Guillermo, finding the man so completely bewildered as not even to hold out his hand, which might have been reached, called to me to let go the soga, which I did with heart-rending reluctance. Guillermo then put the end of the soga

* Shortly afterwards, Guillermo Smith entered the Peruvian army, in which he is at present a major of Artillery. He commanded one of the Blakeley guns, carrying a shot of 450 lb., in the Ayacucho battery at Callao, when the Spanish fleet attacked that place on the 2nd of May, last year (1866). He was fortunate enough to inflict most serious damage on two of the Spanish men-of-war; one shot went through the steam-chest of the *Villa de Madrid*, killing, wounding, and scalding some thirty of the enemy. The Spanish fleet was beaten, and had to sheer off. The badly-damaged portion went off in the direction of the Philippines to refit, but had first to make the Sandwich Islands in their way for temporary repairs; the other portion took the route round Cape Horn.

into the man's hand, and returned with all speed to the other end, which was floating some twenty yards from the rocks. He then commenced tugging, with all his strength, to drag the man towards the shore; but the strength required was too much for him, and, when nearly exhausted, a heavy sea rushed in round the rocky point, foaming in all directions. Poor Guillermo was covered by it for so long a time that my heart sunk within me, fearing he would rise no more. Of course he let go the soga to save himself, and when his head did appear above the water, he called to me for assistance, saying that he could not stand another sea. I was soon stripped; and calling to him to keep up his spirits, made the best descent possible over the broken rocks. With anxious eyes upon him, I waited the result of a few moments, and saw that he had yet strength to reach the shore. I was partly in the water, ready to strike out if necessary. With some trouble I got him up the rocks, where he remained for some time unable to move, and throwing up the sea-water he had swallowed.

"All this time our poor guide was insensibly beating the water with his hands; and, for all that I could do, I could not get him to keep them under water, and use them in making way for the shore. He knew nothing whatever of swimming, but most surprisingly kept his head above water for more than an hour, and at last gradually disappeared. This was a most appalling sight to see a fellow creature so long in the water, and having no means at hand to save him. One more soga would have done it. . . This dreadful accident will cause us to remain on this inhospitable shore to-night, as we are all depressed with fright and gloom, and not fit to get up the *cuesta*, which is so steep and long.

"At 6.30 p.m. we make the best meal we can upon what the drowned man's ass had pleased to leave. In our absence, the ass got hold of our *alforjas* (saddle-bags), and helped itself to nearly all, but has not drunk the brandy: so far we are well off. No doubt we shall have plenty of beastly, blood-sucking, black bugs of the Pampas, called in Peru, *Binchucas* or *Chirimachas* (Reduvius), for bed-fellows to-night.

"16th January.—Passed a very fair night, considering the stony description of our beds; and at daylight prepared for our return to Sal de Obispo by another track, sending our animals to meet us in the *cuesta*-top. . . Started alone for the *caleta* (inlet), to the N. about two miles, and I never had a more hard task, many of the passes being so dangerous, with thousands of difficulties. I arrived there with Guillermo, who overtook me, but I was completely done up. I sent him off to meet the rest of our party on the top of the mountain, and to send down an Indian with water and something to eat. The Indian presently arrived with water sent by Oviedo, but had heard nothing of Guillermo; so I sent him back immediately, and determined to stay upon this melancholy shore until the morning—when I expected a mule from Oviedo—my only companions sea-birds and vinchucas.

"I had observed some of the *Vinchucas* walk off full of my blood, but did not feel their bites. Being completely tired out, and suffering from thirst, I tried a bathe in the sea. I felt relieved, and then crept under a large block of rock, which was supported at both ends, leaving just room enough for me to creep in, and upon rounded stones I passed the time, asleep and awake, until about midnight. It was moonlight, and with great effort I made a start for the *cuesta*. I never had so hard a job in my life. The side of the mountain was so steep, that I could only climb a few yards and then rest awhile to recruit strength and breath, and again struggle forward. The ascent was so steep, that to rest myself I had to lie on my back with outstretched legs and arms, and even so I was not safe, as I found myself sliding down on more than one occasion, which movement awoke me from profound sleep, into which I invariably fell the moment I stopped to rest. I came at last to a narrow path, and on this I found a secure resting-place, and there I slept until about 8 a.m. on the 17th. When Osorio hove in sight, coming down the mountain with the animals to my relief, I was about half-way up and could not move another step. I drank a bottle of water, and we proceeded. At the summit we had a meal. Mine was three cups of tea with plenty of brandy in it. Height of the *cuesta*, 1,765 feet. Got again to Sal Obispo."

On my journey from Peru to Chile by the coast in 1827, mainly in search of reported masses of meteoric iron existing in the great desert of Atacama, leaving Paposo, traversing Mal Paso, a very dangerous and rocky track overhanging the sea, I came to Hueso Parado, where I fell in with a party of Indians I had hoped would have crossed the desert, but their journey was only along the coast.

The subject of the meteoric iron haunted me, and on my companions observing, that if I were a *Vaqueano del Desierto* (a good desert traveller) I might cross the desert of Atacama, and about a spot called Huanaquero, find one of the *Reventasones*, outbursts, or mines of pure iron, I decided at once upon the exploration; and giving my mule a good drink of water (for in all probability it would be two or three days ere the animal again had one), I started alone upon a track running E. N. E., and was informed that after travelling some twenty-five or thirty leagues I should come upon the track from Copiapo to San Pedro de Atacama, about Baquillas; then pursuing this track northerly come to Huanaquero Grande, the position of one of the *Reventasones*. Should I find no one there, I was to continue onwards to Peine, the other *Reventason*.

I had travelled about three hours, when I found that instead of the track I thought I was on, I had got among others, going in all directions, which on careful examination proved to be those made by troops of Huanacos in their search for water and pasture. In a word, I was lost, and had got also amongst half-moon-shaped sand-hills. Out came my compass, and, as well as I could, I commenced travelling westward to the coast. I was perplexed indeed, working my way in and out of the sand hills. Having got up one of them with difficulty, in consequence of the looseness and depth of the sand, I hoped to see the mountains of the coast; but arriving at its summit, beheld yet another in advance of me. I descended in a thoughtful mood, sat down, smoked a cigar, and came to the wise conclusion to let my mule have its own way. Mounting, and throwing the reins over its neck, the animal began ambling cautiously in and out of the sand-hills. When, about dusk, we struck the coast track, thankful indeed was I for having thus escaped being lost in the terrible desert of Atacama, another victim to science.*

I will now proceed to say something of the wealth accruing to Peru, in consequence of the rainless character of its shores on the Pacific.

In the north, near Tumbez, the coast is washed by the great river Guayaquil; but coming south the want of moisture is soon observed; from eight to ten years pass without rain, but when it does

* See report by Dr. R. A. Philippi to the Government of Chili of his explorations in the desert of Atacama in 1853, where he describes his falling in with specimens of the meteoric iron of Atacama.—*Trans. Geographical Society*, 1855.

"History of Meteoric Iron of Atemaca, by W. Bollaert.—*Journal of Meteorological Society*, 1858.

rain, such is this quantity, that certain places are inundated; after which there is a spontaneous vegetation, of pasture, flowers, and fruit. Close upon this state of things, follows the great desert of Sechura, of nearly one hundred miles across. The atmosphere is calm, surprisingly clear, and, during the day, excessively hot.

The quantity of fish in the waters of this portion of the Pacific, and the still large numbers of huano-producing birds, may give some idea of the still greater number of the latter in former times, when they could so deeply cover the Lobos Islands in 6° to 7° S. Did rain but fall in this or other portions of the coast of Peru, there would be no huano; however numerous the birds, their droppings must have been washed into the sea. In 8° 30′ S. are the huano islands of Guanapé.

We now arrive at the extraordinary deposits of huano at the Chincha Islands. There are three, the North, Middle, and South, in latitude 13° 30′ S. The North island is the largest; a mile in length and half a mile wide. In 1862 the South island was examined, when no portion of the huano had been touched. A plain exists on this island covered with the bodies of seals, which, on being turned over, were found to be converted to a large extent into huano; some of the borings gave 105 feet of solid huano. About 1840, the first shipments of this substance were sent from Peru. For years past the quantity annually exported is about 500,000 tons, giving employment to say 700 ships. The net proceeds per annum of huano to the Peruvian government is about three millions sterling. A late survey gives for the quantity still remaining at the Chincha Islands over seven millions of tons, which, at £6 per ton net proceeds, amounts to £42,000,000. The value of the huano trade to the shipping interest alone, averages annually a million sterling. It will be seen by the following that huano exists in other localities on the coast of Peru, and the quantity still there is, in

	TONS.
The Chincha Islands - -	7,000,000
The Lobos Islands - -	4,000,000
The Guanapé Islands - -	3,000,000
Chipana - - - -	500,000
Point Lobos - - -	1,500,000
Huanillos - - - -	2,000,000
Pavellon de Pica - -	3,000,000
Puerto Ingles, &c. - -	1,500,000
	22,500,000

Showing a net value to the Peruvian government of about 138 millions sterling.*

There can be no doubt that there are other collections of huano, exclusive of more ancient deposits, known as Costra or Caliche Huano, something like that of Ichaboe.

The possession of the huano deposits mainly gave rise in 1854–5 to the lengthened revolution of General Castilla against the then president, General Echenique, in which Castilla was successful; but it threw the whole country into ferment and war. In the province of Tarapacá, I was present at two fights of the opposing parties, in which blood was spilt. The use of huano in Europe and the United States, independently of increasing the yield of crops, it is asserted has even tripled the value of some sorts of lands. It may be said to be the political ruler in Peru, and in the "good old times," would have been canonized as a saint. The Peruvians have a saying, that although the huano is no saint, yet it works miracles in more ways than one.

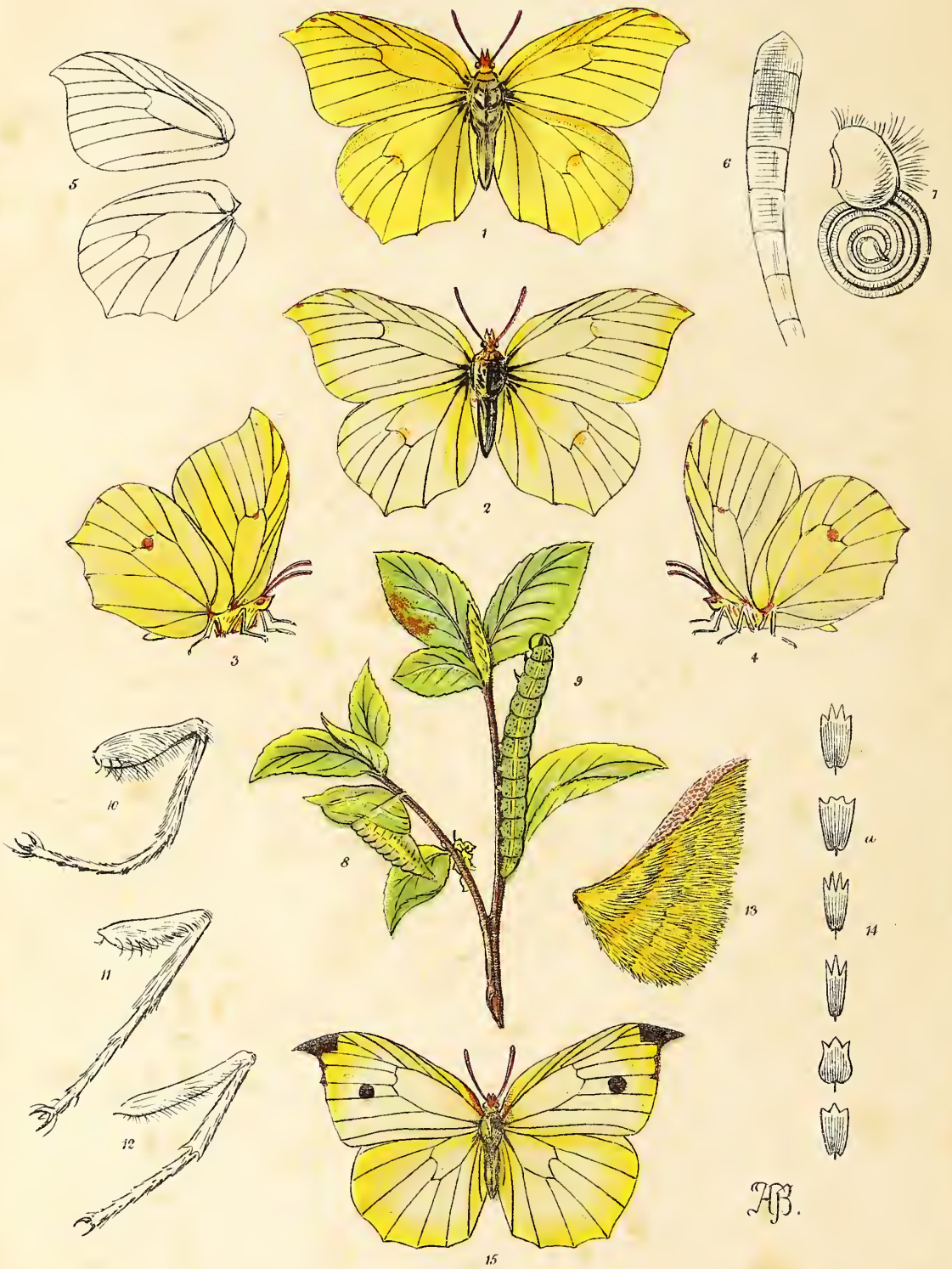
But for the excessively desert character of the country, there would be no salt, nitrate of soda, or borax. Some 125,000 tons in 1865–6, of refined nitrate of soda (selling in Europe at £12 to £13 per ton), and a quantity of borate of soda and lime is annually (the borate by special permission of the government) shipped, principally to England, from the province of Tarapacá. Mr. George Smith, the early originator of the nitrate of soda trade, has calculated that the nitrate of soda ground covers some fifty square leagues, and a hundred pounds weight being allowed for each square yard, there still remain sixty-three millions of tons on the ground; and at the present rate of consumption, there is a stock for about 1,000 years.

Iquique, the principal port of shipment for this valuable article, when I first knew it in 1825, was composed of a few fishermen's huts. For some years past it has had a population of some 5,000 inhabitants, and has lately, in consequence of its great commercial importance, been declared a *ciudad*, or city. This spot is a complete desert; the water drunk there is distilled from that of the Pacific Ocean; still every comfort and even luxuries are to be obtained. There are two churches, a theatre, club, newspaper, and a good circle of society.

The coast valley of Cañete yields sugar to the amount of £200,000; Pisco and Yca, 70,000 jars of brandy, 10,000 barrels of wine, 800,000 pounds of cotton, and 40,000 pounds of cochineal. Other valleys in the south produce sugar, wine, olive oil, &c. The northern valleys yielded much cotton, and more was expected in future. I will not particularize here the produce in silver of such mines as Pasco, the exports of alpaca and sheep wool, hides, &c.

In 1859, the Peruvian budget showed a revenue of 21,893,180 dollars (five dollars to the pound sterling); of these, 15,875, 352 were from the sale of huano. The expenditure was 20,387,745 dollars, showing only a surplus of 1,505,435 dollars; the army and navy of a state (containing only 1,880,000 souls, including all the Indians), alone requiring 11,877,306 dollars! This was under the military President, Castilla. The customs exports of Peru for 1862 amounted to 22,492,259 dollars, but 26,000,000 is nearer the truth, as there is still some smuggling of precious metals out of the country, to escape paying duty.

* See *Illustrated London News*, February 21, 1863, for some admirable drawings, from photographs, of the Chincha Islands.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The traveller who may arrive in Peru during the hot summer months, will be astonished at the aridity of the coast. He will see a few shrivelled Tilandsias, some species of Cacti, Cardo Santo (*Argemone Mexicana*); and if the sea-shore is explored, the horny Salicornia, some species of Salsola, Sesuvium, and the long Macrocystis Humboldti or Sargasso. The great desert line of coast is cut here and there with valleys and ravines, in which the traveller may rest, his sight having been nearly blinded by the reverberation of the sand upon tropical vegetation, and where he can assuage his thirst with cooling fruit of the Granadilla (*Passiflora lingularis*), the orange, and other fruits, and repose his limbs under the shade of the plantain tree.

I have adverted to the more interesting objects connected with the Peruvian deserts; but there are unpleasant occurrences, as the earthquake and the *terciana* or ague.

The volcanoes, dormant and active, are mostly on the western or Cordillera side of the coast; these are one of the great signs of subterranean chemical action. The other is the terrible earthquake, resulting from the underground explosions, causing the destruction even of whole cities; some, situated on the sea-coast, as Callao, were once washed entirely away by the waters of the Pacific rolling in a gigantic earthquake wave, which, on retiring, swept all into the deep. The city of Arequipa has been totally destroyed five times, from 1540 to 1784.

The next drawback to a residence in the valleys of the coast of Peru, is the *terciana* or ague. I nearly became a victim, having caught a bad sort called the *atabardillada*, at Pica, in the province of Tarapacá, at over 4,000 feet above the level of the sea. The treatment then (1826) was doses of powdered Peruvian bark in old wine, and lemonade. The chills and fever would in time disappear, but occasionally fatal dysentery would follow. Quinine was not then known in that region.

Dr. Hamilton, who practised in Tacna as early as 1825, says he paid, as the wholesale price at Lima of adulterated sulphate of quinine, £7 the ounce. He mentions that the desert portion of Peru is free from *terciana*, but it is found in all the valleys and ravines where there is water and where there is vegetation; for at all seasons vegetable matter is more or less in a state of decomposition there. The vegetable malaria is more concentrated and deadly in some localities than others. He had to remain with a party of eight, a day and two nights in the valley of Tambo; seven took the dreaded fever, volatile organic matter being conveyed into the system through the medium of the gastric, respiratory, or other organs.

Terciana is not endemic on the high table-lands, but appears again on the eastern slopes. For many years past quinine, in its various preparations, has been administered in Peru, with its well-known salutary effects.

At Tacna 18° S., 1,400 feet above the level of the sea, and a little inland, the mean temperature is about 64° Fahr.; the greatest heat in the shade is 90°. On the sea-shore, in latitude 20° 12′, the winter mean heat is from 62° to 67°; in summer 72° to 78°, but mid-day in the sun it is scorching.

A short time after the foregoing was written, a Spanish fleet stealthily took possession of the Chincha Islands, on account of some old and trifling claims on Peru, and ere the Spaniards gave them up, got nearly a million sterling out of the Peruvian government.

The Spaniards next went to Valparaiso, but finding the Chilenos would not give them the satisfaction they required, bombarded it, a defenceless city, destroying in particular all the public buildings. The Spanish fleet then sailed north to Callao in May, 1866, in the hope of destroying that port and its fortifications; in this, however, they got very much the worst of it, the more disabled portion running off to the Philippine Islands, the other portion round Cape Horn. Peru and Chili are still at feud with Spain, and Spain will have to apologize to those Republics, ere peace can be re-established.

OUR BRITISH BUTTERFLIES:

THEIR STRUCTURE, HABITS, HISTORY, AND FOREIGN RELATIVES.

By Arthur G. Butler, F.Z.S., Assistant, Zoological Department, British Museum.

Part II. *Rhodocera Rhamni.* The Brimstone.

THIS delicate butterfly, the second on our lists, is, wherever it occurs, one of the most common of British insects; it is by no means rare upon the Continent, and may be met with in great numbers in some parts of India. Few insects can be more attractive to the eye than this species when upon the wing; its flight, though rather more rapid and powerful, very much resembles that of the well-known *Pieris Brassicæ*, or common white butterfly of our gardens; like it, the Brimstone has a habit of repeating the same regular journey over and over again for hours together, therefore, though the collector should miss his insect the first time it passes him, he need not despair of eventually capturing it, if he but remains in the same place for a few minutes. Of this fact we had practical proof the very first time that we saw the insect alive, and in the neighbourhood of London.

The Brimstone is at its prime towards the middle of August. In order to see it to perfection it is

necessary to leave the noise and bustle of town, and choosing, if practicable, a clover field in the vicinity of some large wood, we are not long in detecting its golden glories upon the wide-spread purple carpet, for in such spots as these our yellow friend especially delights.

What luxury, whilst scenting the delicious perfume of the clover, to watch those sulphur-coloured fairies fluttering from flower to flower in search of their sweet food!

Having taken our fill at the Brimstone's restaurant, we may enter the wood where we again perceive these butterflies in pursuit of beauty. The charm of the female of this species depends upon its greater delicacy of colouring, the male having the advantage in richness of hue.

The males far exceed the females in number (this seems to be usually the case with common species), and consequently the competition in matrimonial affairs is something dreadful. We have taken seven Brimstone butterflies at one stroke of the net, and six of them proved to be males. The genus *Rhodocera*, to which this species belongs, contains a great variety of beautiful forms, in all of which the prevailing colour is yellow. We have figured one of the most curious, the *Rhodocera* (*Gonepteryx*) *Wallichii*, of Doubleday; it is a native of North India, and by no means a common insect. A figure of this species, showing both sides of the wing, will be found in the "Proceedings of the Zoological Society" for 1865, under the name of *Gonepteryx Urania*. The eggs of the Brimstone butterfly are of a conical form, with ribs sculptured on the sides. The caterpillar, when fully grown, is green, finely speckled with black, and with a pale lateral line; it may be found upon buckthorn (*Rhamnus catharticus*) and alder buckthorn (*R. frangula*). The curiously-shaped chrysalis is suspended by means of a central girdle and a web of fine silk at the extremity of the tail; its colour is bright green varied with yellow.

The only well-known variety of the Brimstone is found in the south of Europe, India, Madeira, &c.; it differs from the common form in having the greater portion of the front wings suffused with orange. It has, however, been described as a distinct species under the name of *Cleopatra*, but the fact of its having been bred from the same batch of eggs with *R. Rhamni* has effectually proved its identity with this common species.

By reference to our plate it will at once be seen that the arrangement of the veins upon the wings of this insect differs considerably from that in the Swallow-tailed; the nervules at the front margin (*costa*) of the upper wings being all widely separated, whilst in *Papilio Machaon* they lie close together. Again, the termination of the cell* is in this species concave instead of convex, but a careful eye will readily detect these and many other points of distinction between the two insects; so we need not enter into a more detailed description of them here.

The scales are somewhat variable in shape, but not nearly so much so as in the preceding species; this may be partly owing to the uniform colouring of the insect. The legs are short, hairy, and thickly clothed with scales; as in the swallow-tailed, they are all made use of in walking.† The antennæ (horns) are flat, and in form something between a cricket-bat and a canoe-paddle; the annulations are not very distinctly marked and are rather wide apart. The proboscis is black and flattened; it coils up very much like a watch-spring, and is protected by a pair of moderately large palpi, which when strongly magnified, form beautiful microscopic objects; they are clothed with long yellow scales, excepting at the upper outer margin, where the scales are short, and of a blue-grey colour, varied with red points.

The caterpillar of *Rhodocera Rhamni* may be found from May to July; the perfect insect leaves the chrysalis during the following month, and may be met with until towards the end of October, when it hybernates, and appears again in February, the females then continuing until May. The males, if taken in the spring, are frequently so much shattered and chafed, that they are utterly useless as specimens for the cabinet, although they may still be of value to cut up for microscopic objects. This beautiful insect is common and generally distributed in the south of England; it is scarce in the midland counties, and does not occur in Scotland.

Explanation of Plate.

Fig. 1. *Rhodocera Rhamni* (male).
„ 2. „ „ (female).
„ 3. Underside (male).
„ 4. Ditto (female).
„ 5. Wings denuded of scales, to show the veining.
„ 6. Part of antenna, magnified.
„ 7. Proboscis, or tongue, attached to part of head.
„ 8. Chrysalis.
„ 9. Caterpillar on food-plant.
„ 10, 11, 12. Legs, magnified.
„ 13. Palpus, magnified.
„ 14. Different forms of scales.
„ 14*a*. Commonest form of scales.
„ 15. *Rhodocera Wallichii* (Doubleday, North India).

* The large clear space from which most of the veins branch off.

† In several large families of butterflies, the prolegs are only rudimentary.

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NOTES ON THE EARLY HISTORY OF ENGRAVING.

I. WOOD-ENGRAVING.

IT may not be too much to say that of all the important discoveries and inventions which have marked intellectual progress that of engraving is entitled, all circumstances considered, to the first rank in general estimation. As a vehicle of design it claims precedence, in point of utility and influence, over painting itself. In the latter art we have only one picture for each laborious effort of the artist; but when the engraver has performed his work, copies almost without limit may be taken from it, to spread their influence far and wide, and through countless ages of time. For prints upon paper are more durable than paintings, whether upon pannelled walls or upon canvas; and their value, as preserving the lineaments of the great art-products of every school and age for a distant posterity, cannot be over-estimated. What the world has lost of the teachings of ancient Art for want of this vehicle will at once be understood and acknowledged. Whilst some fragments of the sculpture of the Greeks still remain—at once the marvel and the instructors of a remote age—achievements of theirs in painting have been entirely lost to us; whereas, so far as design and composition are concerned, these might have been preserved for our delight and edification had the process of engraving been then known.

M. Monier, painter to the King of France, and professor of painting and sculpture in the Royal Academy at Paris, in his "History of the Arts," published towards the close of the seventeenth century, remarks upon the important influence which the multiplication of works in painting, sculpture, and architecture had upon the revival of the Arts in countries which were not, like Italy, stored with great original examples of Art, ancient and modern. "Engraving," he says, "has conferred the same advantages upon painting as upon architecture, and has given solid instruction to several painters. This may be remarked of the prints of Marc Antonio, engraved after the designs of Raphael, which have taught the true manner of designing to several very considerable painters. By the help of those prints, for instance, the illustrious Poussin made great progress when in Paris as a youth. It was here this great painter so happily imitated the style of Raphael and the ancients." Another example of the kind may be cited in our own Reynolds, who was first incited to the cultivation of the arts of design by some prints which he employed himself in copying. But the influence of Italian Art throughout Europe, more particularly in England, France, the Low Countries, and Germany, through the means of engraving, is very striking to all who study the history of the various schools of Art.

It is not, however, in the reproduction and preservation of works of design that the art of engraving presents its highest claim to our recognition and gratitude. Wood-engraving was early applied to the production of books of history, and of instruction in religion, and other branches of knowledge, printed from blocks, and consequently called "Block-books." The blocks themselves, before many years elapsed, suggested the employment of moveable types, the most essential condition of the art of printing, properly so called. In illustration of the momentous results which have attended this invention, it may suffice to say that the first Bible printed from moveable metal types appeared in 1450; and that about seventy years afterwards the spirit of inquiry thus promoted had given to the Reformation the form and substance which were to insure its practical and enduring effects.

Speaking in a general sense, engraving may be said to be of two kinds,—Xylography, or Wood-engraving, from ξύλον, wood; and, Chalcography, or Copperplate-engraving, from χαλκὸς, copper. The distinctive difference between the two is that in wood-engraving the lights are cut away, leaving the lines forming the design in relief; whilst in copperplate-engraving the lines composing the design are incised, leaving the surface untouched on those parts which are to remain white on the paper. The "working off," or printing, in the two cases necessarily differs also. A wood-engraving is worked at an ordinary printing-press, like the type of a book, the ink being passed over the relief surface, and afterwards impressed upon the paper; whilst in the copperplate the ink is rubbed into the incised lines, and then, by means of a roller press, transferred to the paper. Steel-engraving is but a modification of copperplate, the object of employing the material in question being its superior hardness, and its capability of giving a greater number of impressions than copper.

Of the two processes, wood-engraving is the more ancient, the date of its origin being a matter of dispute, which has formed the subject of many a ponderous tome of antiquarian lore. Down to a comparatively recent period, the opinion generally received by that class of writers who are content to copy without inquiry whatever comes readiest to hand, was, that the art of wood-engraving was invented in Germany. In the eighth edition of the "Encyclopædia Britannica," for instance, published so late as 1856, we find it stated, without hesitation or qualification, just as it was stated in the fifth edition of the same learned compilation, fifty years before, that "for this invention it appears we are indebted to the *brief-makers*, or makers of playing-cards, who practised the Art in Germany about the beginning of the fifteenth

century," adding in a note, "such playing-cards, however, were in use in Germany" (the writer does not state whence obtained) "as early as the year 1275."

To those who at all consider the state of anarchy, darkness, and misery which prevailed in Germany during the whole period of the Middle Ages (a state of things which compelled the Hanseatic League to establish itself, in order to afford points of refuge for the ordinary interests of trade), and the low condition of Arts and Letters, which was the natural accompaniment of this national debasement, it might very naturally occur to doubt the probability of this barbarous region being the seat of an important and interesting invention, calculated in a greater degree than any other to foster the arts of peace, and promote the intellectual advancement of the world. But, apart from the suggestions of common sense, there have been made, within the last half-century, a vast amount of curious researches, the result of which tends to show that the original seat of the art of wood-engraving was very distant from that so unhesitatingly accepted by the "Encyclopædia Britannica;" and that its course was not from the dreary wastes of Central Germany to the more enlightened West and South of Europe, but from the ancient seats of civilization in the far East, through northern Italy, and thence through Western Europe into Germany. In other words, it is contended by recent writers, Papillon, Singer, the late Mr. Ottley, and others, that the use of this invention is of remote date in China and Japan; and that it was through Venice, which, as is well known, carried on an extensive commerce with those countries, and was the medium of communication between them and the commercial ports of the West and North of Europe, that it was introduced amongst us.

On the other hand, in opposition to this view, it has been gravely contended that there is no evidence to show that the Chinese themselves were acquainted with this art as early as the thirteenth century, much less of their having communicated such knowledge to the Venetians.

It has been urged that Marco Polo, in his celebrated account of China, written in 1295, after his return to Venice, makes no mention of this art amongst the many wonders of the country which he dilates upon; and it is urged from this that the art did not at that time exist amongst the Chinese. To this, however, is to be replied that this very silence upon so important a subject would have been unaccountable,—indeed, could hardly be supposed to have occurred,—supposing the art to have been practised in China, and unknown in Venice; but that it may be at once naturally and satisfactorily accounted for on the supposition that wood-engraving was already well known, and commonly practised, not only in China, but in Venice also.

With regard to the early use of this art, or of the appliances which are involved in it, it may be observed, as is very well known, that the printed stuffs of the Chinese are of very remote antiquity, being apparently printed by means of stamps, or blocks of wood, in the same manner as the cotton prints of Europe of a more recent date. Again, the Portuguese missionaries, on their first visit to Japan, in 1549, found the art of block-printing in use there; and Alvaro Sunedo, in his "Relatione della Cina," states that "the Chinese, according to their works, claim to have used the art during a period of sixteen centuries." To conclude with this branch of the case the learned Baron Mearman, in a paper in the "Origines Typographiæ," quotes a variety of passages from a "History of China" written by Abusaid, in Persian, A.D. 1317, from amongst which it may be sufficient for our purpose to cite the following:—"All the books edited by the persons in question" (alluding to those Chinese *savants* whom he names), "are written in a beautiful hand, so that each page may be transposed in the same handsome characters *to the blocks* with which the men of learning are always at great pains to collate their manuscripts, attesting by a private mark on the back of each block their approbation of it. They next commit these blocks, or tables, to the *best engravers*, and finally complete the whole by numbering the pages." The Persian author then goes on to describe the systematic manner in which these blocks were preserved in cases under seal; which would argue it to have been an old-established practice, and not one of recent adoption.

But, indeed, the art of taking impressions in black or coloured inks from seals, or stamps, engraved for the purpose, by way of authenticating deeds, and, amongst the Chinese, paper-money itself, is unquestionably of the very highest antiquity in the East, and was probably derived thence by the Romans, amongst whom we have abundant examples of the like kind. In later times we find Charlemagne and the Frankish monarchs pursuing the same practice, with seals or stamps, which were probably first made of wood. It seems difficult to suppose that the obvious uses of such an appliance should have been through a long series of ages in great manner overlooked, and that it should all this while have been restricted to the sealing or stamping of documents.

Having said thus much in support of the claims of the East to the first use of this art, the next question that arises is how it found its way from thence into Europe. The probability is, as has been already suggested, that it was imported through the then great emporium of Oriental commerce, Venice, whence it afterwards found its way into Central and Western Europe, through the Low Countries, and the ports of the Hanseatic League.

We have already observed that in all probability the art was known and practised both by the Chinese and the Venetians in the time of Marco Polo, at the end of the thirteenth century; and what goes a great way to support this impression, so far at least as Venice is concerned, is a very curious decree of the Venetian government, which was published, printed from an engraved wooden

block, in 1441, setting forth "the decay into which the art and mystery of making cards and printed figures had fallen," and, for the restoration of this "art and mystery," and the encouragement of native talent, prohibiting the importation of "playing-cards and works of art printed or painted on cloth or paper." It may be not unreasonably insisted that an industrial art of this kind could not have been invented or first introduced, have attained to a considerable amount of remunerative practice, and have eventually fallen into decay so signally as to call for Government intervention for its protection, except in a series of years measured by generations, if not by centuries. Let us hazard the conjecture that the first cards used in Germany, say, in 1275—the earliest date named in the note of the "Encyclopædia Britannica,"—were imported from Italy; that the Germans afterwards commenced making them for themselves, some of which in course of time found their way into the North of Italy, and were the cause of exciting the jealousy of the Venetians, which manifested itself in the above-cited decree of 1441.

As it tends to support the claim of Italy to priority over other European nations in the use of this art, the account given by Papillon, although unsupported by corroborative testimony, is deserving of attention. Accepting his statements as authentic, they establish an instance of engraving on wood as early as the year 1285. Papillon begins his narrative by telling us that in 1758, when employed in the way of his trade in papering the walls of a room in the house of a Swiss officer whom he names, at Bagneuse, near Mont Rauge, he was shown by the latter a volume containing nine wood-engravings, representing events in the life of Alexander the Great (which he minutely describes), the work of a brother and sister of the name of Cunio, and which were dedicated to Pope Honorius IV., who occupied the Papal chair during the years 1284-5. The story of these young amateur artists, as related in a MS. statement which had been inserted in the volume in question by the Swiss officer, its possessor, is rather a romantic one. It appears that they were the twin children of the son of a certain Count de Cunio, by a Veronese lady allied to the family of Honorius IV., whom that young nobleman had married clandestinely, and contrary to the wish of his friends. This marriage was annulled, and the husband was compelled by his father, the Count de Cunio, to espouse another lady; but the twins were nevertheless brought up and carefully educated in his house, their stepmother loving them as if they had been her own children. Already at the age of thirteen they were highly accomplished in Latin, geometry, music, and painting; at the age of fourteen the boy went with his father to the wars, where he was wounded, and knighted by his father on the field of battle. It was after his return that, jointly with his sister, Isabella, he commenced those designs of the actions of Alexander, engraving them on wood, and of which he presented copies to Pope Honorius and other relatives. He again joined the army, and was killed in battle—his sister dying of grief shortly afterwards at the age of twenty. Such is a brief abstract of the narrative given by Papillon, as copied by him from the written statement in the book itself. "Some years afterwards," concludes the writer of this statement, "the generous Count de Cunio gave this copy of the 'Actions of Alexander,' bound as it now is, to my grandfather; and I have caused the leaves to be inserted, upon which, by my orders, this history was written."

It is certainly unfortunate that this curious volume, which Papillon states he saw in 1758, has not been since discovered by any one who has written on the subject; and the whole story of it has consequently been denounced as apocryphal by many writers who appear not to have studied the evidence in the matter with sufficient care. Strutt and Bryan, for instance, when writing the prefaces to their respective dictionaries of painters and engravers, appear to have read Papillon's narrative so curiously that they charge him with giving it all upon the hearsay evidence of the Swiss officer, and never having seen the book himself; whereas he clearly states that he had seen the book and closely examined it.

Heinecken, who espouses the claim of Germany to the invention of wood-engraving, contemptuously dismisses Papillon's statement as utterly unworthy of credit, and argues upon the names and dates mentioned in it, to prove its impossibility. These arguments, however, have since been investigated at length by Zani and Ottley ("Origin and Early History of Engraving"), and the result of their researches is to establish the existence of all the principal persons mentioned by Papillon in his narrative, together with many corroborative circumstances; and they consequently come to the conclusion that the story of the works of these Cunij is true.

With the exception of the playing-cards of Venice, and the illustrations of the achievements of Alexander the Great by the gifted Cunio, we have no account, even traditional, of the early practice of the art of wood-engraving in Italy. It is to the Western and Northern states of Europe that we must look for its application to nobler uses; and here again, in apportioning the honours of the achievement, authorities are at variance. Authorities of the class to which the "Encyclopædia Britannica" belongs tell us very confidently that whilst we are indebted to the *brief-makers*, or playing-card makers, of Germany for the invention of wood-engraving, we are indebted to them also for applying their newly-discovered art to the production of the block-print books, which early in the fifteenth century came to take up the ground previously occupied by the ancient missal, with its artistic miniature decorations. But the late Mr. Ottley dissented from this position; considering that, although the arts of painting and engraving may have been practised throughout Germany long previous to the commencement of

the fifteenth century, "the honour of having first contributed to their improvement belongs more especially to the artists of the Low Countries, and others who inhabited the western countries of Germany."

The earliest wood-engraving at present known, having a date, is one discovered by Heinecken, in the Chartreuse, at Buxheim, near Meiningen, one of the most ancient convents in Germany, and on that account called the "Buxheim Print." It represents "Saint Christopher carrying the Infant Jesus across the Sea." This print bears an inscription in Latin, with the date 1423. On being brought to England it became the property of the Earl Spencer. Another very old block-print—supposed to be older than the Buxheim print—in the possession of the same noble lord, is one representing St. Bridget writing, and from internal evidence would seem to have been executed by an artist of the Low Countries, in the latter end of the fourteenth century.

The same authority considers that some of the block-books may be of as early date as 1420; and he argues that "those of them whose pretensions to antiquity are not unattended by some claims to our approval as works of art, appertain more properly to the ancient schools of Holland and Flanders than to those of Germany, an opinion, indeed, which a comparison of some of the best of these with others professedly and indisputably executed in Germany will tend not a little to support." He then mentions three block-books which he considers entitled to this distinction, namely, "The Poor Man's Bible" (*Biblia Pauperum*), the Book of Canticles, and the *Speculum Humani Salvationis*, or "Mirror of Human Salvation," and the illustrations of these he considers to have been all by the same artist, and to have been produced in the order in which he names them. But the history of some of these block-books, with reference to the many important questions they tend to elucidate, would of themselves fill an article for which, perhaps, we may one day find space. Meantime to suggest the connecting link between the block printing and printing by moveable types, to which we have already casually alluded, it may be stated that the "Speculum Humani Salvationis" is remarkable as having the text of one edition printed in great part from moveable characters, and in others entirely so; and that it was so printed in the edition issued by Laurence Coster, of Haarlem. The question of the first use of moveable metal types—whether by Guttenberg, at Mayence, or Coster at Haarlem—is still a matter of fierce dispute.

THE ARCHITECTURE OF INDIA—THE BUDDHIST.

By William Simpson.

THERE is some uncertainty as to whether Brahminism or Buddhism is the oldest religion of India; there may have been a previous religion: one more allied to the present Brahminical form of worship, than to that founded by Buddha; but if there was, no architectural remains of it are left. There are some remains, said to be Druidical; and there are some to which the word Cyclopean is applied. With the exception of these, and they are but few, the architectural history of India begins with the era of Buddha, which is now generally accepted to be B.C. 543.

That is the date of Buddha's death; the event took place at Kusinara, a town supposed to have been somewhere to the east of Benares. After the incremation of the body, the ashes were divided among seven princes, who had collected armies in order to fight for the sacred remains; for they considered that there "was nothing so precious in the world as the relics of Buddha." Over each of these relics Dagopas were erected, and an eighth was built at Rajagaha over another relic. In this we have the most important practice of Buddhist worship—the adoration of relics; and the most important feature of its architecture—the erection of Dagopas to contain and preserve them. There are some relics of Buddha which were got by supernatural means; such were the eight hairs which were enshrined in the Rangoon Dagopa, in Burmah; and the same may be said of the celebrated relics in Ceylon, of which the most famous is the tooth of Buddha. This is now preserved by our government, and guarded as the Palladium of British power in the island; it is kept in the city of Kandy, the capital of Ceylon.

A Dagopa is also called a Chaitya, but they are perhaps better known by the word Tope. This word is identified with those of Northern India from its use by recent writers. In Cabool and the region around Peshawur there are numerous Buddhist remains, which are known by this name. Tope is said to be the same as the Pali Thupo, and the Sanscrit Stupa, a "mound" or "tumulus." The most ancient of these are exactly like an inverted cup; the more modern vary considerably in shape. The Sarnath Tope, near Benares, rises high like the spire of a Hindoo temple; some are bell-shaped; and the great Dagopa at Rangoon is like the upper part of a sherry decanter. They are always round; the base may be square or octagonal; but the upper and main part of the structure never is so. The Mahawanso, one of the ancient books of Ceylon, describes the erection of one of these buildings, and it gives what must

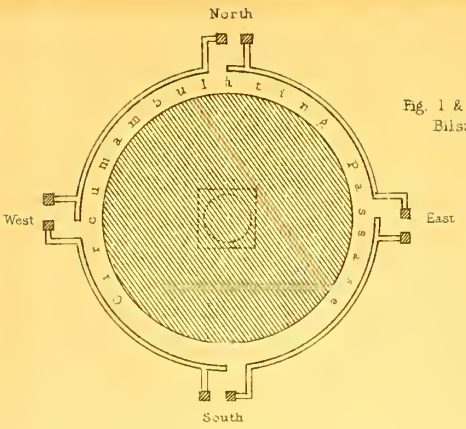

Fig. 1 & 2. Plan and Section
Bilsah Tope, Central India.

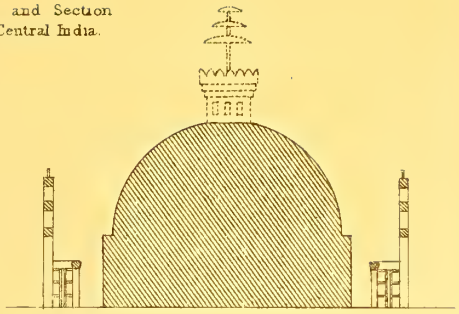

Fig. 5. Dwelling House from Sculptures
on Bilsah Tope

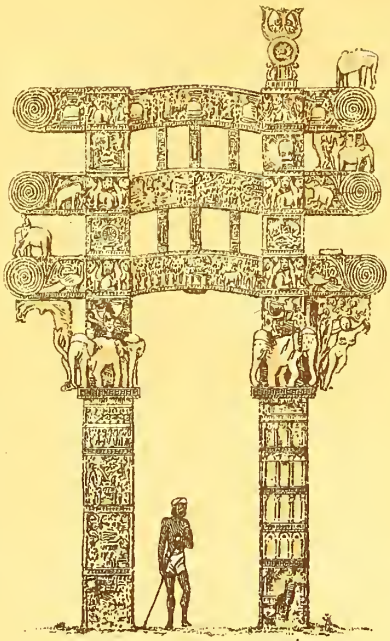

Fig. 4. Eastern Gateway, Bilsah Tope.

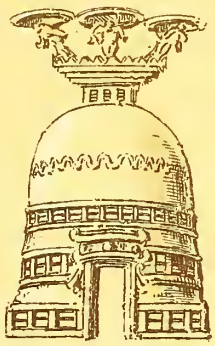

Fig. 3 Tope from Sculptures
on Bilsah Tope

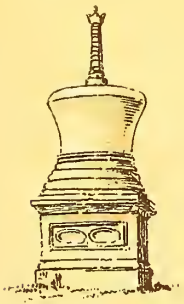

Fig. 9. Choctain or Tibetan Dagopa

Fig. 8. Buddist Railing. Bilsah Tope.

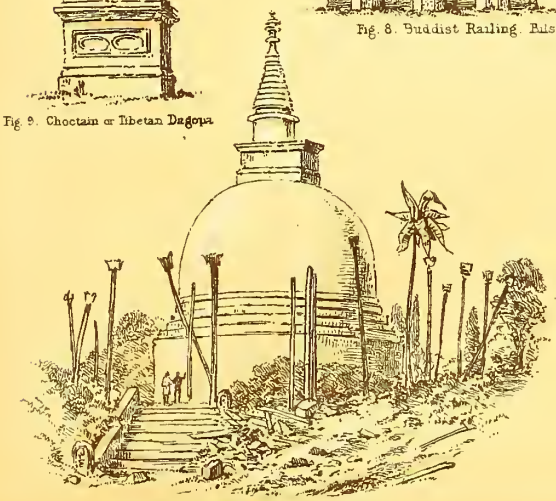

Fig. 6. Thuparamaya Dagopa, Ceylon.

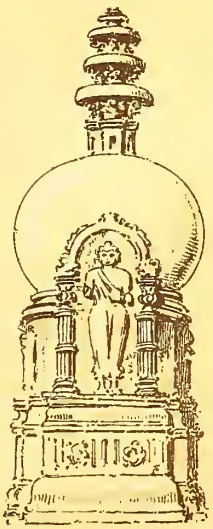

Fig. 7. Chaitya or Dagopa in one
of the Caves of Ajunta

seem—in these days of "competitive designs" for public buildings—a very curious manner in which the architect of that period submitted his design to the king. "The bricklayers were assembled by beat of drum; and the Rajah inquired from the architect, 'in what form dost thou propose to construct the Chaitya?' The architect, taking some water in the palm of his hand, dashed it into a golden vessel full of water; and pointing to a hemispherical bubble of air, which stood for a moment on the surface, he said, 'I will build it in that form.'" The drawing of the Thuparamaya Dagopa (fig. 6) will show the form of those erected in Ceylon, and it will indicate how the architect carried out the design which he produced for the Rajah Dutthagamini. The long slender stone pillars, with large capitals, which surround the Dagopa, are peculiar to this design.

The identification of these Dagopas or Topes with the pyramids of Egypt can scarcely be resisted; both are essentially sepulchral in their character; and both are mounds of building covering or inclosing human remains, the only difference being that the external form of one is square and pointed, while the other is circular and dome-shaped. Although there can be no doubt about the greater antiquity of the pyramids, yet these Buddhist remains in India are undoubtedly the more literal descendants of the most ancient type of tombs, that is, the tumulus or mound of earth heaped over the burial place, remnants of which are found all over the world. "In India the Buddhists conformed to the long-established practice of burning their dead, and the tomb became not the receptacle of a body but of a relic. As in mediæval Europe, the sarcophagus became a stone altar. No one can doubt that *the Tope is the lineal descendant of the Tumulus;* but wherever it was an object of veneration by the Buddhists, it was so as containing some relic of some saint, not as a sepulchre covering the mortal remains of either king or priest."*

This opinion of Mr. Fergusson's is confirmed by General Cunningham in his work on the Bilsah Tope; he says, "It appears also that Stupas had been erected over supreme monarchs prior to Sakya's (Buddha) advent, for Sakya particularly informs his disciple Ananda, that, over the remains of a Chakravarti Rajah, 'they build the thupo at a spot where four principal roads meet.' It is clear, therefore, that the Tope or 'Tumulus' was the common form of tombs at that period. In fact, the Tope, as its name implies, is nothing more than a regularly built cairn or pile of stones, which was undoubtedly the oldest form of funeral memento." (P. 11.)

These quotations indicate the very ancient genealogy of this architecture, and its importance as a means of throwing light back on the earliest times, not only of Indian races, but over the other parts of the world where a cairn of stones or a mound of earth was the primitive form of burial.

Dr. Clarke, when describing the vast quantities of tumuli in the southern part of Russia, points out the same identity between them and the pyramid. He says, "whether under the form of a *mound* in Scandinavia, in Russia, or in North America; a *barrow* in England; a cairn in Wales and Scotland, or in Ireland; or of those *heaps* which the modern Greeks and Turks call Tepe; or lastly, in the more artificial shape of a pyramid in Egypt, they had universally the same origin." (Vol. i., p. 277.) From such authorities we may accept as conclusive, that from the mound or cairn came the Tope and pyramid; and very strong evidence could be adduced to show that the dome and spire are only another growth—or perhaps extension of growth—from the same source; the universality of the dome on all eastern tombs is almost enough in itself to identify it with the Tope; this is a tempting subject, but it would be out of our purpose to follow it farther.

It may be worth adding at this point that the elevation of the Birs Nimrod, or Borsippa, given in Rawlinson's "Herodotus," which is now the accepted Tower of Babel, or at least the probable type upon which that Tower was built, is only a variation of the pyramid or Tope.

Near to Bilsah, in Central India, there must have been, in Buddhist times, a vast city, and whose existence is only revealed to us by the ruins of a number of Topes. On a small hill at the village of Sanchi-Khan-a-Kerri, stands what is generally called the Bilsah Tope; it is the central one in this group, smaller ones being scattered about for some miles. It is, speaking roughly, upwards of one hundred feet in diameter, and about fifty or sixty feet in height. The plan and section (fig. 1 and 2) of it given in the plate will convey an accurate idea of this most interesting specimen of Indian architecture. It is about the oldest building in India, according to Cunningham, who thinks that "the Tope was itself in existence in B.C. 443, that the massive stone railing was erected in the reign of Asoka between 260 and 250 B.C., and that the gateways were erected in the reign of Sri Satakarni between the years 37 and 19 A.D." Its construction was of bricks, with mud for mortar, and an outer casing of dressed stones, the whole being covered with four inches of cement. It is now a complete ruin, covered over with long grass, bushes, and every weed which a tropical climate can produce. From numerous sculptures of Topes on the gateways, as well as from other sources, we know that there would be an erection on the summit, which is now denominated a "tee." This is sketched into the section with dotted lines. A sculptured Tope is given in the plate (fig. 3), and over it is the "triple canopy." A Dagopa from the caves of Ajunta is also given (fig. 6), which shows the Tee and the three umbrellas; they are often represented, as in this last, by figures like an inverted saucer. This is an indication of a later style, all the most ancient preserve the character of an actual umbrella, such as that from the sculpture at Bilsah; garlands hang from the latter, and

* Fergusson's "History of Architecture," vol. ii., p. 478.

between the canopies in the Ajunta one, small angels are carved supporting them. There is a difference between these two Topes in the way the umbrellas are arranged. The dotted lines over the section of the Bilsah Tope (fig. 2) will show how they may have been arranged over it. The meaning of these umbrellas will be best understood from the following quotation from the Mahawanso, on the dedication by the Rajah Dutthagamini of the Maha-Thupo in Ceylon. He said, "thrice over do I dedicate my kingdom to the redeemer of the world, the divine teacher, the bearer of the triple canopy; the canopy of the heavenly host, the canopy of mortals, and the canopy of eternal emancipation." These words manifest the deep signification of the umbrella as a symbol of Buddha. This importance is also indicated by its universality as an emblem. It was used in Thesmophorian and Eleusinian mysteries, and in the rites of Bacchus; Hesychius says under the word σκιάς, "a vine, a convex tent, a pointed umbrella under which Bacchus sits." As the dome of St. Peter's may be allied with the Tope, so the baldaquin may be possibly connected with the "chattar" (umbrella), which is still one of the insignia of royalty in the East.

In the ground plan of the Bilsah Tope (fig. 1) it will be seen that there is a passage all round it, with a gateway at each of the cardinal points. The passage is formed by a very peculiar structure, which is now known as the "Buddhist Railing;" it is evidently founded upon a previous wooden construction, and its peculiar form is used as an ornamental feature, not only on the sculptures of the Bilsah Tope itself, but it is to be found in all the most ancient of the Buddhist rock-cut temples; in fact, the use of this "rail" as an ornament is in itself a proof of a certain antiquity wherever it is found. In the present case it stands as a piece of architectural construction, and it is the only example of it known in India: in every other place it is found merely as a sculptural ornament. It is formed of upright stone posts eight feet eight inches high, over which there are laid long stones, about two feet four inches in depth; between each of the upright posts there are inserted three horizontal stones, or slabs, convex in section; these have sockets cut for them in the posts, exactly as if they were pieces of wood (see drawing, fig. 8). This mode of mortising could never have been adopted by people with stone as their building material; while it is exactly the way in which such a wooden structure would be formed.

The gateways are also erected after a wooden style of construction; they are formed of square pillars about eighteen feet high; this supports three lintels which extend beyond the pillars, and between these lintels are a series of small pillars which act as supports; the lintels are curiously curved upwards in the middle (see drawing fig. 4), and although they rest upon the supporting pillars they are mortised into each other as if they were blocks of wood. The whole of these four gates are carved all over; there are symbols of Buddha, such as the wheel, and the sacred trees; Topes are also to be found with people worshipping. Some of the ordinary avocations of ancient life are represented, and these are unchanged as to utensils or mode of performance even in the present day, showing how permanent are the manners and customs of the East.

The purpose of these gateways and the passage is an important point in Buddhism. It was a ceremonial part of their worship to circumambulate one of these buildings, and they did so muttering prayers and holy invocations; this was done in honour of Buddha, because he is a "Chakravarta-Rajah," or *King of the Wheel;* this is also the explanation of the "Praying Cylinder," which the Buddhists of Thibet whirl as a mode of prayer. The wheel was also called the *Wheel of the Law,* because it evolved, or revolved, the faith (dharma) of Buddha, and it was symbolical of the movements of the heavenly bodies. This circumambulation is also performed by the Mahomedans round the Caaba at Mecca. As the followers of the prophet have no explanation of this ceremony, it may perhaps be a remnant of the old Buddhist ideas, and this is confirmed from the fact that there was a system of pilgrimage from India to Mecca, long before the time of Mahomet.

From the non-discovery of relics in the Bilsah Tope, Cunningham arrived at the conclusion that it was dedicated to the supreme Buddha. He says, "A Tope is properly a religious edifice, dedicated emphatically to Buddha—either to the celestial Adi Buddha, the great First Cause of all things, or to one of his emanations, the Mánúshi, or mortal Buddhas, of whom the most celebrated, and the only historical one, is Sákya Muni, who died B.C. 543. In the Topes dedicated to the celestial Buddha—the invisible Being who pervaded all space—no deposit was made; but the Divine Spirit, who is 'Light,' was supposed to occupy the interior, and was typified on the outside by a pair of eyes, placed on each of the four sides either of the base or of the crown of the edifice. Such is the great Chaitya or Tope near Kathmandu, in Nepál, dedicated to Swayambhunáth (the Self Existent), in which the eyes are placed on the upper part of the building." ("Bilsah Tope," p. 7.) It was only the great Tope at this place which was dedicated to the "Divine Spirit;" the others, of which there are many, contained vases which, from their inscriptions, preserved the ashes of holy men. One of these had an inscription stating that it was the "(Relics) of the emancipated Kasyapa Gotra, the missionary to the whole Hemawanta (Himalays)." The Buddhists were great propagandists, and there are other Topes at Bilsah which preserved the remains of men who had earned a holy reputation as missionaries to the Himalays. In sending missions they took effective means to accomplish their purpose: they did not send a single person, but sent a sort of colony—a whole body of monks. It was thus that they converted Cashmere, and when they had attained their purpose there, a similar regiment of propaganda were pushed on to Thibet, and converted that

country. It was by similar means that Ceylon was converted. The word "emancipated," in the inscription, means that the individual had attained to Nirvana, or final absorption into Buddha. This is the Buddhist idea of ultimate bliss, because it frees or emancipates them from the pains of birth and existence.

It was the belief in re-birth, and the desire to be emancipated from such liabilities, which led to asceticism and monasticism. The numbers who devoted themselves to a holy life seem to have been very large—"the land glittered with the yellow robes," such being the colour worn by the Buddhist monks. They had places to live in together, called "Viharas," of which no more than one or two fragments only are left in India. The most important remains of this kind of building are at Anuradhapoora, in Ceylon, and are called the Maha Lowa Paya, or "Great Brazen Monastery." It was covered with a roof of brass, and probably this was gilt. There are only a few upright granite pillars now standing, and upon them stood the Vihara, built in nine stories of a pyramidal form. Fergusson is inclined to the idea that this must have been the original style of building from which the architecture of southern India took its rise. To it, for instance, we may trace the high, many-storied temples in the form of a pyramid of which the gateway at Madura is a good example. This is confirmed by some of the sculptures on the gateways at the Bilsah Tope. (See Plate, fig 5.) It seems to represent an ordinary house of the time, and we may accept it as figuring the style of the domestic architecture of the period. Certainly no dwelling is built in India at the present day in the least resembling the one on that sculpture. But if any one will compare it with the details of the temples of southern India, a very great resemblance will be seen, particularly in the circular and oval form of the upper windows. This was evidently built of wood, and it is the type from which this peculiar form, so common in all southern architecture, is likely to have had its origin. The whole of the house in the sculpture was evidently of wood; under the windows, where the man and woman are looking out, is the Buddhist railing, which is the great feature of the period. This house—small fragment as it is of the building of that time—renders Mr. Fergusson's conjecture highly probable, that the "Great Brazen Monastery" was erected in a similar style, and that the architecture of southern India is the descendant of this manner of building.

There is only one other species of Buddhist architecture of which it will be necessary to take notice in this article—that is, the old Lâts. They were erected by Asoka, about the middle of the third century, B.C. Asoka had embraced the Buddhist faith, and he put up these pillars to contain the declaration of Buddhist faith, which is called "Dharma." They are found in many places of India, but the best known are those in the fort at Allahabad, and in the Purana Keela at old Delhi, now called Feroze Shah's Lât. They are tall, slender, round columns. The word lât means *staff*, which exactly describes these pillars. They were often surmounted by the figure of a lion. As the Tope led us back to the mound or cairn, these columns lead us also back to the primitive time when it was the custom to set up a stone, and write upon it all the words of the law. This was the practice in the time of Moses, and it can be traced through all the nations of antiquity.

Mr. Ruskin refuses to consider iron as one of the materials of architecture, but although inclined to agree with the principle, we must in the present case refuse to be guided by it, so that we may be able to include the celebrated iron lât at the Kootub (the ancient Delhi) under the term architecture. Delhi (the word comes from *dil*, the heart) claims, like Delphi, to be the *terræ umbilicus*—the centre of the world, and it is believed by the people of India that this iron pillar is the spindle upon which the world revolves. It is a tall shaft, not less than twenty feet high, fixed into the ground; it is surrounded by the remains of an old temple, said to be Hindoo; but the capital on the top of the lât clearly indicates that it is as old as the Buddhist period—possibly even older; and, if so, it becomes the oldest architectural fragment in India. The main point in this iron pillar is, that its claims are so similar to those of Delphi, Jerusalem, and Mecca, all of them being called the "centre of the earth." This is generally explained—at least, in the case of Jerusalem—that it was very near the centre of the then known world; but a more likely explanation would be, that they were all centres of a religious system—they were centres to turn to in prayer; Jerusalem and Mecca are so to this day. By thus giving a religious and symbolical signification, we give a more reasonable character to the title which such places claim.

In Ladak, at the present day, the Buddhists, or Lamas, build Topes, and in the villages they seem often to be more numerous than the houses of the living. In the language of that country, they are called Chock-Tain and Dung-Tain, words which mean "holy receptacle," and "bone-holder." (For the form of these erections see Plate, fig. 9.) They also build a very peculiar erection, called by them a "Manie." This is one of Buddha's many names. It is in the form of a dyke; in section it might be about ten feet square, the top being pointed like the roof of a house; in length, they vary from a few feet to a quarter of a mile. The whole of the upper surface is covered with flat stones, upon which is inscribed the celebrated mystic Mantra, "Aum Mani Padmi Hoong." The Lamas engrave these stones, and pious people buy them, as an offering to Buddha, and place them on these Manies. On the tops of hills, and particularly on the highest points of passes, they erect cairns of stones; these they also call Manies. The stones are thrown together, just like the cairns on places where a murder or unusual death has taken place in Scotland. Into these stones they insert pieces of wood, to which they attach small flags or banners, with prayers written upon them. They are also very fond of putting horns upon them; some are quite

covered with the horns of the various animals of the country. This seems to have been a very ancient practice. There were horns on the altar of the Tabernacle, and Callimachus, in his hymn to Apollo, describes a similar mode of constructing an altar:

"Each day Diana furnished from her toils
The horns of Cynthian goats, her sylvan spoils;
These did the god with wondrous art dispose,
And from his forming hand an altar rose:
With horns the strong foundations closely laid,
And round with horns the perfect structure made."

(*Dr. Dodd's Translation.*)

THE MICROSCOPE.

IN our last number we gave a short outlinear sketch of the progress recently made in the application of the microscope to the arts and sciences, and of the advance made in histological discovery. In the present article we propose to notice some of the more remarkable improvements and inventions in microscopic apparatus and appliances which have of late been described in the pages of our scientific contemporaries. In doing this we shall divide our subject into four or five distinct sections, which, if more or less artificial as divisions, are still useful for the purpose of description. All who are familiar with the compound microscope are aware that it consists of three separate parts—the tube or body containing the object-glass and eye-piece, which together constitute the magnifying apparatus; the stage, or plate of brass, upon which the object intended for examination is placed; and the mirror, which, for ordinary purposes, is concave, and reflects through the object the light which falls upon it either from the sun or from some other source of light, such as a lamp. So much, then, for the general plan of the instrument. Supposing now it be desired to examine an object, it is obvious that the object must be found, and when found must be suitably mounted on a piece of glass before it can be placed upon the microscope stage for investigation. These preliminary remarks, then, show that our subject ranks itself under four distinct heads—(1) that of the microscope itself: its recently constructed varieties; (2) the collection of objects; (3) the mounting of the objects; and (4) the illumination of the objects. Now under these different divisions we shall proceed to discuss the merits of some of the important appliances which have recently been invented by microscopists. First, of the microscopes themselves. Two forms of the microscope are now in very general use—the instrument with the single barrel, technically styled the uniocular, and that in which there is a tube for each eye—the binocular. It would take us too long to go into the principles of stereoscopic vision upon which the latter of these two microscopes depends; but we may mention generally that the advantage of the binocular over the uniocular consists in the fact that it gives the eye a representation of the object in solid relief, whilst the uniocular gives merely a flat picture. The appearance of solidity given by the former being, in great part, due to the circumstance that both eyes are employed simultaneously in viewing the object. Until quite recently, however, the binocular was little better than an interesting toy, for it was impossible to employ it with any but the very lowest powers; but since the application by Messrs. Powell and Lealand of an ingenious modification of Mr. Wenham's binocular prism, the binocular can be used with the very highest powers. We ourselves have examined an object with the binocular microscope with as high a power as the 1-16th of an inch, by the assistance of the contrivance alluded to. The great difficulty which Messrs. Powell and Lealand had to overcome was that of obtaining an image by the whole aperture of the object-glass in each tube of the instrument. This, however, they effected (fig. 1) by interposing an inclined disc of glass with parallel sides, so that one set of rays from the object is transmitted directly through it to one eye, while the other portion of the rays is twice reflected, and thus sent along the second tube to the other eye. It is unnecessary to enter into further details here, as the figure will sufficiently explain the *modus operandi* of this ingenious appliance.

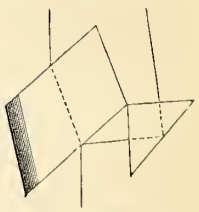

Fig. 1.

Of binocular microscopes for both students and amateurs the best and cheapest is that which has been made by Mr. Collins, of Titchfield Street, for Professor Harley, of University College (fig. 2). This is a fine and solid instrument, and is characterized by a piece of apparatus which saves the observer a great deal of trouble and inconvenience. Instead of the simple drawer containing the prism, Mr. Collins employs an oblong box, one portion of which contains the prism and another a part of the polariscope. The second part of the polariscope lies beneath the stage, so that it can at once be brought into play. The advantage which this addition gives Mr. Collins' instrument is this, that without any loss of time an object may successively be examined binocularly, uniocularly, and with the polariscope. Another convenient accessory to this microscope is the sliding bar upon which the two objetives, 1-inch and $\frac{1}{4}$-inch, are placed. By simply moving them either to the front or back a low power is substituted for a much higher one, or *vice versâ*.

A new class of microscope has recently made its appearance under the various titles of sea-side

microscope, traveller's microscope, pocket microscope, &c., and which has advantages of its own.

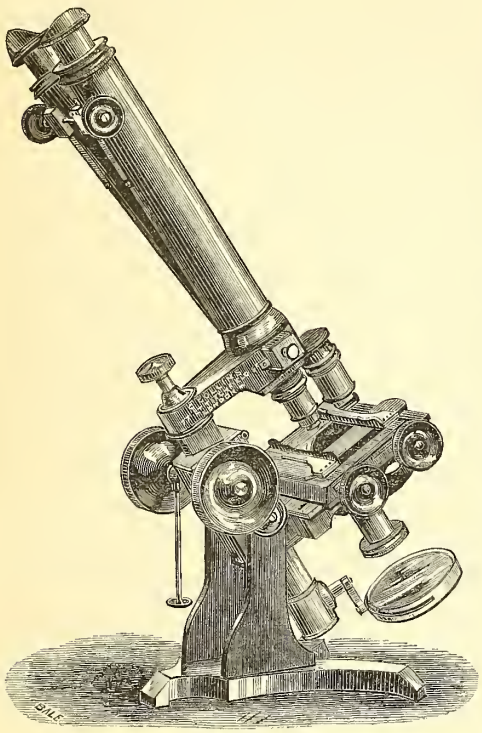

Fig. 2.

It frequently happens that the naturalist or the physician requires to examine some objects under circumstances when it is impossible to have access to an ordinary microscope. To provide against such emergencies the instrument referred to has been prepared. There are four separate forms of it. The first we shall describe is that made by Messrs. Baker, of Holborn (fig. 3). When packed in its case, it takes the shape of an average-sized tourist's telescope, and is suspended by a sling which passes over the shoulders. When taken out, three legs unfold from a central pivot on which the tube swings, and form a tripod stand, the larger leg bearing the stage and mirror. It is focussed roughly by sliding the tube as in a telescope; but the finer adjustment is provided for by a screw and spring attached to the central leg. When required to be placed vertically, these smaller legs screw into the instrument and constitute a tolerably firm foot. A second form of this class of instrument is made by Messrs. Murray & Heath, of Jermyn Street, and is shown in fig. 4, where A and C show the instrument in the vertical and inclined position. Mr. Highley, of Green Street, Leicester Square, supplies two distinct varieties of the portable microscope. The first, which we believe he styles the traveller's microscope, is a handsome instrument in form somewhat like Messrs. Baker's. The three

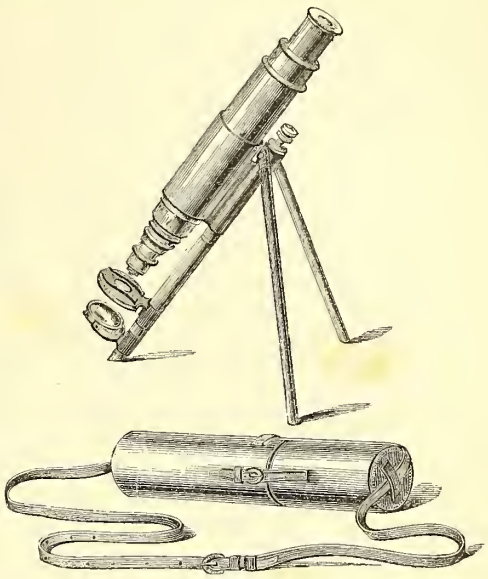

Fig. 3.

legs upon which it rests, however, have this advantage over Mr. Baker's, that they are fastened into a semicircular collar, in which the body of the microscope swings, instead of into the central leg. The object of this is to enable the worker to employ the microscope either in the inclined or vertical position without the trouble of altering the foot. The accessory apparatus supplied with this microscope is of the usual description. To this class also belongs a Liliputian microscope, which Mr. Highley has appropriately named the waistcoat pocket microscope (fig. 5). It is not an instrument which we should recommend for the purpose of research; but it is certainly a wonderful miniature. When packed in its German silver case, it measures about three or four inches in length, and is not more than

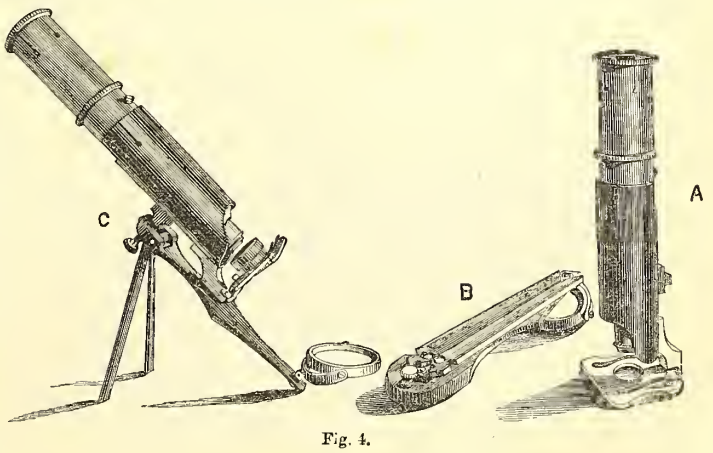

Fig. 4.

three-quarters of an inch in diameter. It is provided with an object-glass which divides into inch

and quarter-inch powers. The cut shows its general form; J is the body, B a draw-tube to increase its length, D is the eye-piece, and C is a little animal-

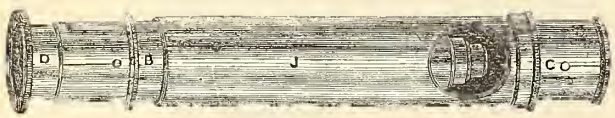

Fig. 5.

cule cage. Mr. Highley has also constructed an instrument which he has termed the "complete

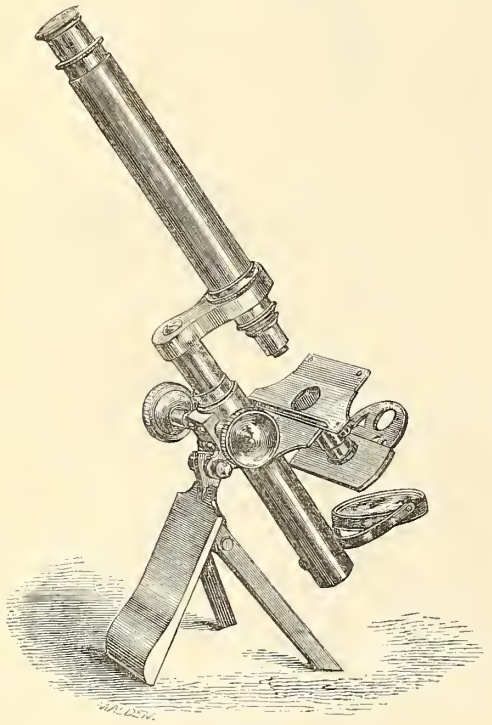

Fig. 6.

microscope" (fig. 6). This is a piece of neat workmanship, and has certain intrinsic merits. It packs into a box 8 inches by $6\frac{1}{2}$, and 4 inches deep, and is provided with a condenser on the Webster plan, and with a polariscope. The application of the latter is ingenious. The ray of light is polarized by reflection, the place of the ordinary flat mirror being taken by what is termed a "polarizing bundle." The analyzer is situate in the body of the microscope.

Of compound microscopes the above are the chief forms lately introduced to the public. In the class of simple microscopes we know of only one novelty. This is the instrument known as "Dr. Lawson's Binocular Dissecting Microscope" (fig. 7). It is intended for the use of naturalists and anatomists, and is somewhat peculiar. Its stage is in the shape of a trough, and is made of gutta-percha. To this the animal or structure intended for dissection is pinned down under water. Beneath the stage is a plane mirror, which reflects light to the object under notice through a small glass plate inserted in the bottom of the trough. The sides of the case draw out and form arm-rests, and the lenses are placed on a sliding horizontal bar, which in its turn is attached to a vertical rod, which has a telescope movement. The top and sides "let" down, and contain the knives, needles, forceps, scissors, &c., requisite for dissection. The lenses are not simply convex lenses, but are portions of the periphery of a large lens, thus preventing all distortion. When a small object—say a worm or the eye of an animal, is dissected under water, all the parts are seen with the aid of this instrument standing out in relief, and magnified so that the operator has no difficulty in recognizing the several tissues, &c. Readers are aware that in the older forms of dissecting microscopes the absence of the binocular arrangement, giving a rather flat picture of the object, renders the difficulty of dissection often very great.

Having disposed of the microscopes themselves, we come now to the second portion of our subject, the new methods of illuminating microscopic objects; and in the first place we may speak of the

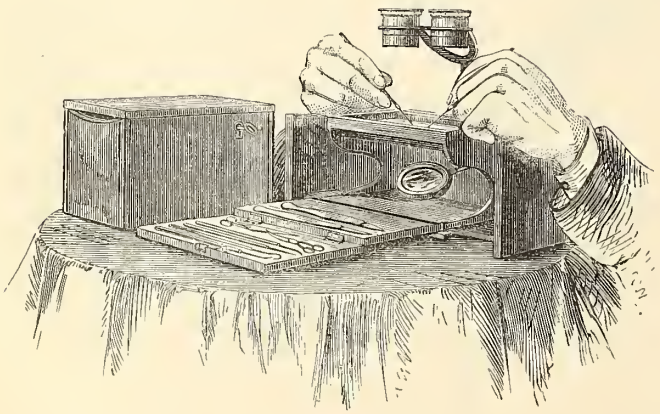

Fig. 7.

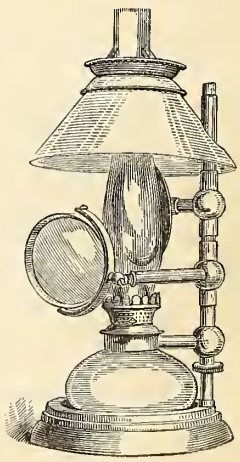

Fig. 8.

Bocket microscope lamp (fig. 8). This is manufactured by Mr. Collins, and is a companion to the microscope which every microscopist must find of benefit. It consists of a firm circular brass foot, from which rises a solid rod which bears the lamp, condenser, and reflector. The lamp is one of the paraffin kind, but is of such construction that danger of explosion is avoided. The reflector and bull's-eye lens, as well as the lamp, are moveable up and down upon the vertical rod; and are so arranged that when placed in proper position with regard to each other, the whole three (lamp, reflector, and condenser) may be elevated or lowered without much re-adjustment—an immense saving of time for the worker. The illustration will explain the details.

It is usual, when examining transparent bodies, to place between the mirror and the object a combination of lenses calculated to throw a very bright stream of light upon the object. This combination is termed an achromatic (non-colouring) condenser, and hitherto it has been nothing more nor less than an inverted object glass, a very expensive appliance. Lately, however, an amateur microscopist (we believe one of our constabulary), Mr. Webster, devised an arrangement of lenses which not only supplies the place of the old condenser, but give also what is known as dark-ground illumination

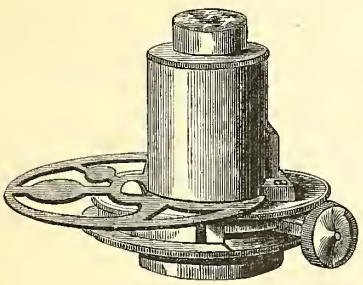

Fig. 9.

(fig. 9). It consists of a double concave lens cemented to "a very deep crossed lens" fixed in a brass tube or body which fits beneath the stage of the microscope. A circular disk provided with curvilinear apertures and "stops" is also attached to it, and when used displays the object in white upon a black ground; thus giving to such structures as the shells of the Foraminifera an appearance of great beauty. This is the Webster condenser as first introduced; but it has been much improved by the addition of Mr. Collins' graduating diaphragm, which we now venture to describe (fig. 10). The ordinary diaphragm supplied with microscopes is a circular plate of bronzed or black metal

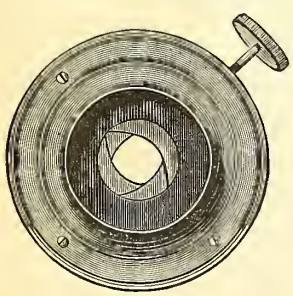

Fig. 10.

pierced with a number of apertures of different sizes, and its use is to cut off superfluous light so as to give an object the exact amount of illumination it requires and no more. But it always happens that a slightly smaller or greater quantity of light than that which the aperture of the diaphragm supplies is required. To meet this want, Mr. Collins constructed the apparatus represented in the adjoining illustration. Beneath a cap of brass, which is placed below the stage, are arranged four moveable shutters connected with a lever, which in its turn is worked by a milled head. By turning this latter the shutters may be opened or closed to any extent—the aperture always retaining its original form—and thus the precise quantity of light required is allowed to fall upon the object.

The illumination of opaque objects is generally conducted with what is known as a bull's-eye condenser. This is simply a very large magnifying lens which, when placed between the object and a lamp flame, causes a bright spot of light to fall upon the latter. In the case of very minute objects, however, viewed with high powers, the bull's eye cannot be used, and until lately it was impossible to examine very minute bodies as opaque objects. The obstacles in the way were removed by a contrivance invented by Mr. Smith, an American microscopist, and which is now manufactured by

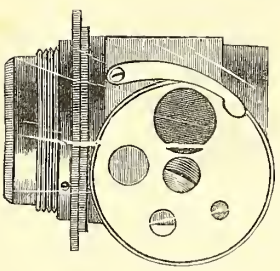

Fig. 11.

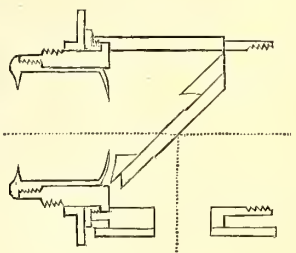

Fig. 12.

Messrs. Powell and Lealand, of Euston Road (figs. 11 and 12). Mr. Smith made the object-glass its own illuminator by piercing a small hole in the upper part of it, and fixing opposite to this, and at a certain angle, a disc of glass; a lamp being placed near the aperture the light falls on the disc of glass, as shown in the figure, and is reflected by it upon the object; the light then coming back from the object, and traversing the disc, reaches the observer's eye. The microscopist sometimes finds that, whilst there is only sufficient light to illumine his object satisfactorily, there is too much light around the object—the illuminated field of view, in other words, is too glaring. To obviate this, Mr. H. J. Slack has recently devised a plan which has been carried out effectually. He introduces a sort of shutter into the eyepiece. By working this he can so contract the field of view that it merely incloses the object. Thus, whilst perfect illumination is obtained, the eye is protected from the injurious influence of a brilliant stream of light.

We come now to our third section, that relating to the mounting of objects. By mounting is meant placing an object on a glass slide, fixing it in some preservative substance, such as glycerine or Canada balsam, covering it with a piece of thin talc-like glass, and fastening this down with cement. In performing these several operations under the old method the object was often displaced owing to the want of some contrivance for keeping it *in situ*. This difficulty has been overcome by Dr. Maddox, who has given us what he terms a "spring-clip." This is a piece of wire bent in the shape of a letter-clip, and which, when placed upon the glass slide, exerts a firm pressure on the thin glass covering the object, and thus keeps it in position till the cement

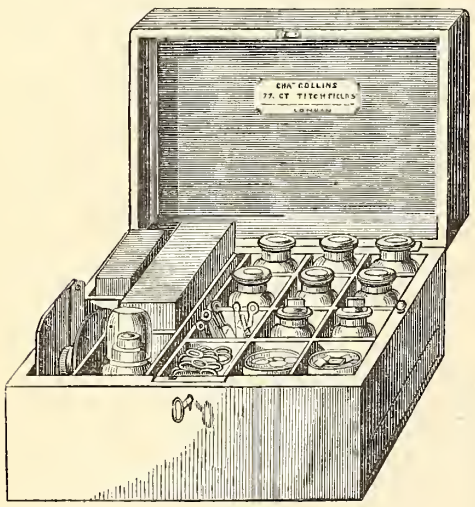

Fig. 13.

used to fasten it is sufficiently dry. A useful little case has been recently made by Mr. Collins, and is called by him the "amateur's 'mounting'-case" (fig. 13). It is nothing more than a neat cabinet containing a number of compartments, in which are stowed away all the paraphernalia of the worker.

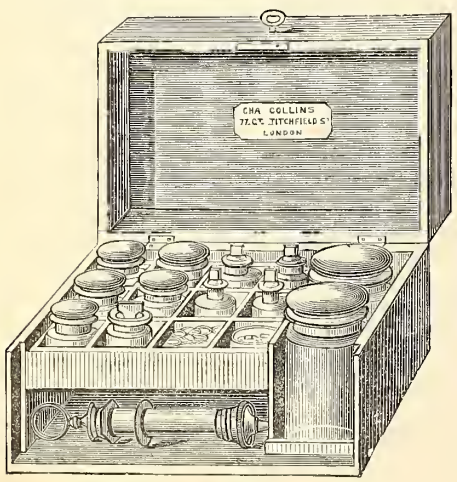

Fig. 14.

The figure gives a general idea of the contents. But we may mention that, besides the glass slides, the cells, covers, fluids, cements, spring-clips, &c., the case contains a turn-table, spirit-lamp, and brass table for heating the slides. Similar in form, but very different in contents, is the case known as Dr. Lawson's student's mounting-case, also made by Mr. Collins (fig. 14). This is intended for the medical student, and contains, besides all the usual accessories, cements, and so forth, the peculiar liquids employed in injecting the finer bloodvessels, a syringe, razor, and certain chemical reagents. Messrs. Baker have just added to their list of apparatus for mounting a very convenient little air-pump, which deserves the notice of microscopists (fig. 15). It

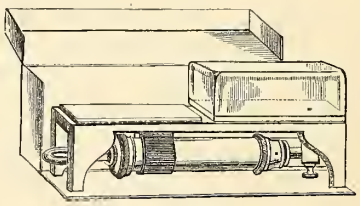

Fig. 15.

consists of a good syringe, fixed under a wooden table, on the upper surface of which is a metallic plate pierced by a small aperture. Over this latter rests a cell of solid glass, some inches in length and height. In using this instrument to remove air-bubbles, the microscopist places the slide on the metallic plate, covers it with the glass cell, and by a few pulls of the syringe exhausts the air.

The last novelties we have to notice are those in relation to our fourth section—Collecting. First in order comes Mr. Collins' collecting-case (fig. 16), a

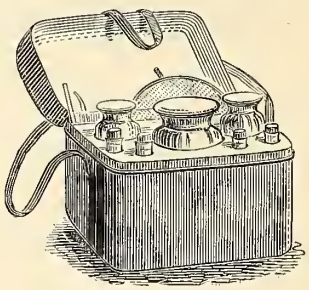

Fig. 16.

handy tin box, with hinged cover, and which is either suspended by a sling passing over the shoulders, or is fixed in an ordinary tourist's bag. It contains three large bottles for water animals, and three or four tubes, with corks, for insects, &c., besides a small net, which, when used, is attached to the ferule of a stick which accompanies the case. Mr. Highley makes a smaller case, or rather pair of cases, which are intended to be stowed away in the naturalist's pocket. *His* net is mounted in spring-steel and packs into a very small space. Mr. Baker's pond-stick (fig. 17) is somewhat like that of Mr. Highley and Mr. Collins. Removing the

ferule a second stick draws out, thus increasing the length; and to this is fastened a ring, into which the bottles contained in the case, and also a useful weed-knife, are screwed. The differences between the sticks and nets of the three makers are of trivial importance; but we are not quite certain to which of them the right to priority of manufacture belongs. Some say Mr. Highley was the first to use a stick of the kind, but it is certain that the contrivance was simultaneously exhibited in public by him and by Messrs. Baker.

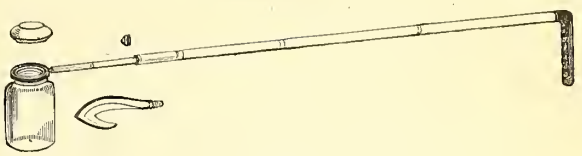

Fig. 17.

KING CHASSELAS.

By G. W. Yapp.

WANDERING about the pleasant country watered by the Seine, the Marne, and their tributaries, during the few happy summer days which that severe mistress, duty, allows to her desk-bound sons, I found myself in the curious old town of Moret, situated just beyond the extreme verge of the forest of Fontainebleau. Moret was formerly a walled city with advanced works, situated on an island in the middle of the river Loing which bounds it on one side; some portions of the old walls still remain, but the island is now covered by a flour-mill, which does a good deal more work, and probably makes a great deal less noise, than the old bowmen and men at arms who formerly inhabited the place. At each end of the road which passes through the middle of the town, in a line with the double bridge which spans the river and connects the island with the opposite shores, is a curious old gate-way, in excellent preservation; and adjoining each of them are remnants of the old military buildings that sheltered the garrison, not only from the weather, but also from the winged or other messengers which the restless spirits of the feudal ages might attempt to send into old Moret. In order that any wanderer like myself, coming suddenly upon the place from the river side, should have no doubt concerning his whereabouts, the name of the town is painted on a tablet fixed over the gate at that end, just as Smith or Brown place their names over their shops, an uncommon but after all a very natural act. One of these gate-towers was the scene of a sad catastrophe about two years since. It is in the occupation of an inn-keeper whose establishment adjoins it, and one of the upper apartments was used as a dining-room for visitors. Three or four artists and literary men were collected there in a joyous group when the whole of the floor gave way, and the party was precipitated into the room below; they were all much hurt by the falling of the heavy beams and flooring upon them, and two out of the number, if not more, eventually died of the injuries they received, a sad warning against trusting the soundness of such old constructions when not under the care of competent surveyors.

Moret possesses a very beautiful and curious church, and also the remains of one of those refuges of widowed queens —the *châteaux* of the *Reines Blanches*—of which there are so many in various parts of France. Another of the lions of the place is an old house in the high street, on which is a slab informing visitors that Napoleon the First slept there on his way from Elba in 1814.

On the occasion of my visit to Moret, early in October, the first thing that attracted the eye was not the *Château* of the *Reine Blanche*, or the church, or the old gate towers, but walnuts. The streets were all walnuts, spread out on sacks, horse-cloths, and almost every possible kind of cloths, that their brown jerkins might be dried in the sun, after removal of their green overcoats, and (sulphur not being used in France to bleach walnuts), to enable them to travel up to Paris or elsewhere, in close carriages, without perspiring or spoiling their complexions. Walnuts are not by any means to be despised; and "wine and walnuts" has become a standing phrase, but there was metal still more attractive, not very far off; and I, with certain young lasses of my kin who accompanied me, determined to extend our walk, and visit the birthplace of the *Roi Chasselas!* You will not find the name of this monarch in the regal tablets of France; he is neither Merovingian, Capet, nor Bourbon, yet he is invariably called Chasselas of Fontainebleau, and he reigns at the present moment as regally as ever. Whoever else may be at table, he invariably fills one of the highest places; the proudest men acknowledge his virtues; the chastest lips are always ready to embrace him, and children dote upon him; who then is a happy monarch if it be not King Chasselas of Fontainebleau? We therefore bent our steps towards the place of his birth, and there we found him, not on a throne, not at the head of an army, not sitting at the council board, but hanging on a wall!

But we are proceeding a little too fast; our walk was not a short one—the calendar had gone forward to "jolly old October:" but Sol seemed to be retracing his steps and picking up some of the time he had lost in August; we knew that King Chasselas loved sunny weather, so we expected to find him with a joyous face. We made our way towards a little place, containing about a house and a-half perched upon a hillock, and known, probably to the extent of two miles in every direction, by the name of Veneux. From this we looked down upon Saint Mammés, a small town sparkling in the sunbeams in the midst of emerald meadows at the "meeting of the waters" of the Seine and the Loing. Certainly Saint Mammés has chosen a very pretty summer seat, yet it struck us, as we looked on the very fresh grass around, that he must be liable to occasional attacks of rheumatism.

Turning our backs upon Saint Mammés and the meadows where "the bright waters meet," we found ourselves approaching another place whose name is not quite so well-known as London or Paris, and which must have been christened when letters were scarce, or the days short. Its full name is By; and we did not hear that it was ever abridged by way of endearment. We made for By, as we had been instructed, by the high road, but we missed it, and to our small regret, for we found ourselves in a huge orchard, or rather, in a wilderness of orchards, a world of fruit, an ocean of lusciousness. It is needless to say what fruits grew there, but it may be mentioned that while rich purple and waxy green grapes hung in luxurious profusion on all sides, we indulged in a few bunches of richly ripe currants, and might have revelled in specimens of every fruit in season. For a mile or more the road into which we had accidentally wandered—and which we propose to call for distinction, "By-the-Bye"—was lined on

each side, as far as the eye could reach, with orchards, and the ground was literally so covered with apples and pears, that fruit seemed to be considered worthless, a notion which was not, however, to be long entertained in face of the fact that a small army of road makers was engaged in making still firmer and neater the already firm, hard, well-kept road of "By-the-Bye." When we had wandered and wandered to our heart's content upon this fruity thoroughfare, thinking that perhaps the small attendance of birds in the forest of Fontainebleau might be accounted for by the superior attractions of luxuriant By-the-Bye, we began to cast our eyes around for the "towers" of Rosa Bonheur's castle which we knew to be near at hand. The search was a short one, for just as we were emerging from this great orchard street, a tall tower—a real tower, as we had been told and did not believe,—rose before us, and there, on one of its faces, we saw a clock dial about the size of that of the Horseguards, and the initials in solid brick, of the famous painter of the Horse-fair, *Chevalière* of the Legion of Honour. The tower, which has quite a feudal air, is tacked on to a comfortable old-fashioned house, and the large studio windows—the Great Northern Lights as they may be called—together with the apparent extent of the grounds and out-houses, bear witness to the tastes and pursuits of the famous *Châtelaine*. With a pleasant feeling, in which we hope no envy mingled, that talent *sometimes* met its reward, we gave a hearty (mental) cheer for Rosa Bonheur—a *Salve Rosa*—and proceeded on our way. By one of those unaccountable slips we had almost, from old association, written *Salvator Rosa;* but we saw the mistake in time, and thus escaped a terrible solecism.

Where By ends, we never quite made out, but there, wherever it is, Thomery begins—and Thomery is just as fruity as By, although far more "wally" and less orchard like. Along the high road both of By and Thomery, and in every street of both, there is not a bit of wall open to Phœbus's bright glances that is not laden with fruit. Here no shops are visible, only walls pierced with doors and windows, and covered with lattices and fruit; the road-side inn is a small vineyard; the tailor is set in a square frame surrounded with leaves and clusters, and we saw the blacksmith hammering with might and main in a parlour—we can call it nothing else—whose wall was brilliantly white beneath a treasure of verdure and fruit. The walls and lattices are unlike any other fruit-walls and lattices we have seen elsewhere: it is evident that the former are lime-washed, and the latter painted every year, in order to destroy those smaller creatures which love fruit as well as we do, and rudely, though perhaps sensibly, generally help themselves first. Among the fruits are conspicuous those magnificent pears which are to be seen in the Palais Royal, somewhat in shape and size like legs of Welsh mutton, with others of more modest bulk and even more tempting appearance. As corpulence tends towards the earth, and pears are not persistent in their attachments, shelves or slight frames, filled in with wire or net work, are placed just beneath the lowest branches to break their fall; as we passed we saw several ripe monsters reclining calmly in the splinter netting thus spread out to catch them.

But at Thomery the vine assumes the supremacy, and even the most luscious, melting pear must hide his diminished head in presence of that fruit which Anacreon so loved, but which so cruelly requited the poet's affection and sadly rewarded his mellifluous praises, by sticking in his throat. Almost every yard of ground at Thomery is covered with rows of walls or espaliers, and there it was that we found King Chasselas of Fontainebleau hanging in all his glory. Chasselas is the name of those magnificent grapes first grown at or near Fontainebleau; and now at Thomery, its little dependency By, and a village called Champagne on the opposite side of the Seine. The espaliers are only about three feet, and the walls about six feet high, and the latter are so placed that the sun shines upon one of their faces from the time of its rising till about one o'clock in the day; and the other side is always bare, for no parasite may diminish King Chasselas's means of subsistence. The top of the wall is covered with a slight overhanging roof, but another mode of protection in the shape of a hanging shelf of straw or wood is also in use. The grapes grow from very near the ground to the top of the wall, and the vines are so carefully trained, trimmed, and tended that at a distance the walls have almost the appearance of those trellice and grape paper hangings which, under certain favourable conditions, may help even the occupant of a garret to fancy himself in the country. But this nearly geometric arrangement is saved from monotony by the endless variety of nature, for, even if form be brought under absolute rule, colour and the play of light are happily still free. Even the walls in the public roads where the aspect is good are covered with delicious fruit, and the vines are only protected by a slight fence of laths or wire, which almost any arm could easily reach over; and in the streets the luscious crop seems in danger from every passer by, but King Chasselas is evidently respected in this his chosen dominion.

While the grapes are hanging on the wall, they are constantly supervised, and women may be seen in all directions busily removing with a small pair of scissors all the damaged berries they can find, and, when the bunches are ripe, they are plucked with the greatest care. They are not placed in masses, but gathered into neat, small, white baskets that do not hold more than two pounds each, or thereabouts, and they are then carried home as carefully as delicate porcelain. The method of conveying them is curious; a man carries on his back a light wooden frame, consisting of two sides and four shelves open behind, and having each only a narrow lath towards the porter's back to prevent the baskets from slipping through; each shelf holds four of the baskets and the frame, consequently, sixteen in all. When they reach the home of the dealer, each bunch is again examined—being held by the stalk while any bad grains that remain are removed with the scissors—and the grapes thus prepared for sale are laid out in trays on fern leaves to dry in the sun, before being packed for market. The day of our visit was the first on which one of the growers had sent any grapes to market, and the price of the commonest description was four *sous* (less than two pence) for a French pound, which is one tenth heavier than the English. The finest kinds, with berries as large as damsons, whether white or red, were selling on that day at fifteen *sous* a pound, but the price often reaches as high as twenty, and even twenty-five *sous*. The damaged grapes are, of course, sent to the press, but it need scarcely be stated that the district is not more famous for its wine than is the country that produces Champagne or Chambertin for dessert grapes; one object of cultivation is sufficient for the attention of each district. The grapes are sent to the Fontainebleau and Paris markets in small baskets or boxes, these again being packed in large open sided crates or cradles, and a walk of half-an-hour through a bit of the forest of Fontainebleau brings one to the Thomery Station, a little rural establishment which seems to have been set up for the express purpose of the despatch of full packages of grapes, and the return of the empty ones. A few passengers take or quit the rail there, but it is evident from the manner of the officials that they regard them as interlopers or strays.

The Anacreontic agriculturists are far from being in good spirits this year, and when we referred to the inundation which had occurred only a day or two before, and which had left its marks visibly imprinted on the walls of the lower parts of the neighbourhood, one of the good women who was busy giving the Chasselas their last toilet, said with a heavy sigh, "Ah! Monsieur, it has been indeed a terrible season for us; the rain nearly washed the fruit off the vines, and then to complete the mischief, the river rose upon us, and *some of the grapes were actually under water!*" It is impossible to magnify the terrible importance of this complaint, or the melancholy tone in which it was uttered. King Chasselas under water! Of what import in comparison to the good people of Thomery, was the washing away of hay-stacks, and corn sheaves, and the ruin of green crops. They grow no corn, make no hay, and raise no mangold-wurzel: the Chasselas are to them meat, drink, and clothing, and it is not in human nature to avoid being rather more interested in number one than in number two

or number twenty. Long may it be before the ill-mannered Seine and its mischievous little chit, the Loing, again wet the feet of King Chasselas, and place him in danger of a chill, and may the good old lady of Thomery live a thousand years, and never again see a grape under water. Even without the Chasselas, Thomery would be well worth a visit, for it is unlike any other place we ever saw in France. There is no dirt in its vine-clad streets, we saw not a single dunghill, not a ditch or puddle, not a pig or a duck, though here and there a few genteel fowls of choice breeds, as clean and orderly as well bred ladies and gentlemen. There was scarcely a weed anywhere, or a single straw out of place, and yet Thomery is anything but formal. It is as irregular as an artist could desire, only there are no fine stilton cheese coloured walls, for they would create dust, and harbour all kinds of creeping things which could not be permitted in the dominions of King Chasselas. The only resemblance we can find for Thomery is a charming village scene at the Opera, and nothing was required to complete the illusion, but bands of peasantry in silk and muslin, and strains of delicious music. Surely, there must be a day in the year when the good folks of Thomery put on holiday attire, keep high revel in honour of Bacchus and Pomona, triumphantly bear King Chasselas (in the form of the largest bunch of grapes of the season) to a throne hung with roses, perform before him the true *danse des vendangeurs*, and pledge each other in huge bowls of rosy juice fresh from the purple berries, unfermented, unadulterated, unalloyed.

MICHELET'S "L'OISEAU."*

(Second Article.)

WE could not easily find a prettier head-piece for this our second article than what Giacomelli has designed for the title-page of the Second Part of "L'Oiseau." There may be weakness in one or two of the bramble shoots; but, on the whole, it is a dainty wreath. The lower group will be best appreciated by a mother who has had human chicks of her own to feed, the nursery-maid being out of the way. She will mark how the mother-bird is hurrying home with her prize; and how two of those feathered children have scrambled out, each eager to be first; while a third halts on the edge of the nest, less hungry, or more afraid of toppling over. They will soon follow their parents into the copses or meadows, and hunt for themselves amongst leaves or feathered grasses. We

* "L'Oiseau." Par J. Michelet. Huitième édition, illustrée de 210 vignettes sur bois, dessinées par H. Giacomelli. Paris: Librairie de L. Hachette et Cie. 1867.

need only turn the pages before us to find them at their busy game. As we look at one of the scenes, we remember an old room which we have not entered for ever so many years. There is a bright morning sunshine on the turf and shrubbery outside; but the glass door of the room is darkened by a pair of cherry trees in full blossom. The youngster within, poring over his book, suddenly looks up; he has been startled by a rush and chatter; and there they are, five bold dashing birds, hooded with black and breasted with yellow: they are twittering and fluttering one above another, or swinging head downwards from a spray, and sending a shower of blossoms right and left. He watches them, half sorry for the rifled bough; but he would give up whole days of flowers and all hopes of cherries for the sake of catching "ae blink o' the bonnie birdies." "That may be all very fine for you," some market-gardener will reply, "but I don't moil and toil in my orchard just to pamper up a flock of idle titmice." Oh, hard-headed Rusticus, what are the labours of thee and thy cart-horse compared with those of the father of eighteen tits? And whilst working for them, is he not also working for thee? True, he has a reckless way of picking at a worm in the bud; yet strike the balance, and he may prove to be the best labourer on thy grounds. But we are appealing to a practical man, who only believes what he sees, and cannot see very far. And thus the slaughter of the innocents still goes on, in spite of letters to the *Times* on the great subject of little birds.

The question is really great, for it is permanent; whilst the Luxemburg affair is already beginning to pass over. Michelet enters upon this part of his discourse with becoming gravity: something after this fashion. The *greedy* husbandman, as Virgil justly terms him,—the husbandman blinded by his greed—grudges to his friends what he lavishes upon his foes. Not a grain for him who, in the rainy season, turned every leaf over and over, and routed up the nests of the larvæ! but sacks of corn for the full-grown insects, and whole fields for the nomade hordes, which the birds would at least have decimated! Wherever the bird has been outlawed, the insect has avenged him. In the isle of Bourbon a price was set upon the head of the martin: he disappeared, and the locusts took possession of the island. A similar scourge swept across North America when they doomed the starling, the defender of the maize. Even the sparrow protects more than he destroys; and he has been recalled to Hungary, after years of proscription, in order to check the ravages of the cockchafer. The latter insect, in its grub state, devours the roots of the grasses; and "I have seen (says Michelet) a meadow in Normandy where the entire surface was dried up, and could be rolled off the subsoil like a carpet." And why was this? Because they had effectually scared away the crows. The deadliest enemies of the northern harvest pass the winter underground. They lie there in the shape of eggs. A few are touched by frost, but most of them are beyond its reach. In spring they swarm into life, and maintain it at the expense of the farmer. This is the time for the rook, who plucks up the withered grass, and destroys the destroyer. And as for the creeping things upon plant or tree, no purge is so good for them as the mother titmouse, who can scarcely keep her score of young beaks quiet with three hundred worms a day.

We have just been quoting the statistics of Michelet, who seems to have mustered the beaks of two broods of the titmouse together. It is quite true that, *in the course of the summer*, there have sometimes been more than twenty in one nest, all agape for caterpillars. That hole in a woodland tree, where the brave nest-mother sits hissing and pecking at the schoolboy's finger, ought to be held at least as sacred as our game preserves. It is a lion's den, but only for our enemies. It swallows flocks and herds that would otherwise have blackened and shrivelled up the leaves, and hung the branches with hideous webs. And as each successive brood leaves home, the growing tits by no means leave their appetites behind them. They soon rival their parents in hopping along the twigs after the grub, and in stretching their wings after the moth. Their powers of vision are microscopic. It is stated by Mudie (*British Birds*, 1854, vol. i., p. 405) that "an insect a quarter of an inch long will appear as large to the eye of the long-tailed tit as the common mouse does to the eye of man when held as near as it can be seen." Thus, in the orchards at winter-time, they ferret out the eggs of vermin where no gardener could possibly detect them. The other members of the same family, whether clad in black and yellow or in bright blue feathers, are almost equally sharp-sighted and useful; and the thefts which they commit are very trifling. Yet these friends of the countryman are strung up by him, and borne in triumph to the sparrow-clubs; together with blackbirds and thrushes, which have consumed more slugs than fruits; and together with the finches, including even Goldie, who lives by clearing the land of weeds and thistles. Can it be said that they order *these* matters better in France? Not a bit, we fear. We have somewhere read of French rustics whose only notion of a wild bird was a magpie. And in the present volume (p. 397) a diatribe against idle shooting begins thus: "There are many kinds of birds that no longer halt in their passage over France. One may see them, high out of range, straining their pinions, and saying to each other, 'Onward, hasten onward! keep aloof from the land of death, the land of destruction.'"

At the end of this diatribe Giacomelli has placed one of his elegant tail-pieces. It is the stump of an old double-barrelled gun, with two dicky-birds perched on the lock, singing "Oh be joyful." It prefigures a millennium which is still far distant. Whenever it does arrive, it will bring cold comfort to the game birds. They will soon disappear when they cease to afford a good day's shooting; so that each of them literally falls for the benefit of his kindred. One cannot easily defend amateur butchery on high moral grounds. Excuses may be found, but none that are worth searching for. The one thing certain is that we Englishmen are not likely to lose our sporting instincts till we turn vegetarians. For the present, then, we leave the pheasant to the sportsman; but we do exhort him to leave the swallow to us. It was meant to be something better than a flying target. Again, the farmer must be forgiven if he knocks over a few sparrows and yellow-hammers at harvest-time; but he ought to be shamed out of encouraging the *varmint chaps* who snare and poison by wholesale. Lastly, how about the schoolboy? We agree with Howitt (in his excellent "Country Book") that it is useless, if not undesirable, to warn a boy against clambering after eggs, but that he may very easily be taught the unmanliness of kidnapping the callow young. The most experienced bird-fancier cannot foster them as their parents would have done, and what can be expected from their still ruder foster-father? They are half-forgotten at school-time, and wholly forgotten at cricket-time; and they get alternately starved and crammed, and suffer tortures before they die. Even the fledglings rarely thrive. We remember too well our own jays and jackdaws. We hope that our descendants will be better schooled, and therefore less brutal.

There are two birds that already owe a great deal to literature, in the shape of nursery rhyme. Every child knows the "Courtship and Death of Cock Robin," and also the kindly legend that tells how "the robin redbreast and the wren are God Almighty's cock and hen;" and we doubt whether Science will ever protect the gentle pair more effectually. Once, and once only, we have seen a wretched urchin shoot a cock-robin. He did not know what he was doing, for he was half crazy with the desire of killing. It was almost the first time that he had held a gun in his hands, and the skylarks had been deriding him for half an hour. He turned round against the nearest object, and fired. As the shot left the barrel he beheld a picture that appealed to him too late—the tragedy of an instant. On the topmost twig was a female bird, bending down towards her mate, who stretched up to her from another twig, his whole frame quivering with song: the instant passed, and he dropped. His young murderer was heart-stricken. "I only hope that it is not a robin," he cried, as he ran to pick it up. Many of the feathers were "dyed doubly red" (like the lips of Fair Rosamond when Queen Eleanor struck them), but there was no mistaking the native colour of the breast. We ourselves helped to dig his grave, and we have never

LE NID
J. GAUCHARD

forgotten the pang with which we buried poor Robin under our cherry-trees.

But oh, for those days of our youthful eyes and ears, when the copses sprang and rang around us tenfold more lustily than now. They are long gone by; and so are many later days which we wasted in pottering about the neighbourhood of Gray's Inn. Not that we disdain the square where we so often watched the white pigeons wheel, and settle, and flutter ahead of the creeping cats. Still less that we disdain the garden where the black rook wooes his "Ethiop queen" with a courting stick as black as themselves; and where they bear it aloft between them to patch his ruined castle, founded under the eyes of Sir Roger de Coverley. But both rook and pigeon are as town-bred as the tailless sparrows; and we have often grown sick of them all, when our blood was seething with the May fever. Then the nights seemed sultry before their season; and we would often toss on the pillow counting every crow of the filthy fowls in Fulwood's Rents, from the hoarse Cochin at one end to the shrill Bantam at the other. But lo! a bolt out of bed, a cab, and an early train, and we stand on the Surrey hills! The atmosphere sparkles to our lips like champagne, and washes the soot out of our nostrils. We can smell the sweet white turpentine, oozing from the fresh-tufted branches of yonder pine-trees. We can hear the distant cuckoo, though a long sweep of beechwood lies between us, resounding with the strokes of the woodpecker. We can see everything: the lark like a mote in the sunbeam, and the quaint bee-orchis at our feet. Our senses have returned,—what lack they yet? There is a white house down by the bridge, and there is a look of fresh eggs about it; but we shall not linger there long. We know a glen with a mossy bank, fit for King Arthur in the isle of Avalon. We will sleep *there* till the nightingale awakes us; so close, perhaps, that we can catch the glance of his eye, and see the feathers on his throat swelling and sinking in the moonlight. Such things have been, and may be again. But now, by the *Birds* of Aristophanes, what with visions of boyhood and visions of manhood, our wits have gone wool-gathering in the sky, and building a rare Cloud-cuckoo-town; and the printers have, all the time, been waiting for our second article on the birds of Michelet and Giacomelli. We will descend to earth like the skylark. But first we will take one more turn in mid-air. There are buzzing sounds in an odd corner of our brain—faint echoes of the Greek bird choruses, with burthens of *popopopopoi* and *tiotiotiotinx*. But we are not about to offend our fair readers with the originals, nor yet with our own schoolboy versions. We only wish to assert, that our adjuration of Aristophanes was much less out of place than it might seem to be. We have frequently been reminded of him whilst perusing "L'Oiseau." The Frenchman, like the old Athenian, shoots political arrows from behind his feathered stalking-horse. Hence his abuse of the aristocratic eagle, and hence his praise of the plebeian woodpecker. He considers the latter, with his red cap of liberty, to be the *beau ideal* of the French workman. To complete the resemblance, continues Michelet, he is calumniated. He is reported dangerous to the State: whereas he actually deserves a pension, and the title of Keeper of the Woods and Forests! The episode of poor Pecker in love is very amusing. In fact, Michelet is never dull; and, after all, he is really earnest in behalf of his nominal clients. Earth cannot do without the little birds; yet she treats them most ungratefully. That is the main drift of his argument; and he pleads the cause with force and pathos. But ever and anon his solemnity borders upon the burlesque; and we half expect to hear him cry, Remember what happened in the days of Aristophanes! Remember how the John Bright of Athens awoke the birds to a sense of their rights; and how they built Cloud-cuckoo-town between heaven and earth, so that no rain could fall, and no smoke of sacrifice could rise, until both men and gods were starved into submission.

Our spirit is only a short-winged bird; and its flight is over. You may see a fellow to it, fair reader, in the accompanying design by Giacomelli. It has no great cloud-cuckoo-town to show you: nothing but the corner of a green lane. Its one humble nest is hidden there so cunningly, that we doubt whether you can see a stick of it. Be content with admiring the leaves and ferns; and we shall be sorry if they have not a double charm for you, when you think of the happy home beneath them.

THE FRENCH AND FLEMISH GALLERY.

THE fourteenth annual exhibition of works by French and Flemish painters is now open at No. 120, Pall Mall, and we recommend such of our readers as care for art to take the opportunity of again studying the merits of these admirable schools, and comparing their works with those so lately displayed on the same walls by English artists. In this last investigation, it is right to remember that these pictures take pretty nearly the same rank, with regard to the *chef-d'œuvres* of the two foreign schools they represent as those in the late Winter Exhibition did to our English school. For the most part they are what may be called the common places of the studio, the current accomplishment, the clever essay. Some indeed are replicas of larger pictures which have brought the artists well-earned renown, and some few are by men whose genius is never absent, and whose smallest work shows the divine quality as certainly as their greatest. We think the prevailing impressions produced by the two sets of pictures are, good method and want of light in these, and uncertain and often blundering method but superior intention of colour in the English; and we think also that to the English may be awarded the superiority in individuality. For, although these pictures are various, and full of accurate imitation of things the most diverse, there is to be traced in most of them a following of one or other of the masters who are celebrated in the school, so that the studies of natural things are made from certain points of view. This is of course inevitable to some degree, but these points of view seem to us fewer in France than in England. For with all the badness and wilfulness of our English painters, they generally show us something of themselves, and, in the absence of real art, which is impersonal, this individuality is more interesting to our mind than the mere outside formula of correct style without the genius which it ought to embody. No school has ever laid itself out for great works more determinately than the French, and yet we would hardly say that its successes have been in great works. It falls short of beauty for want of reverence; of heroism, because it is too self-conscious; of pathos, because it is too elever; and it is a curious reflection, that of this great self-glorifying French school the chief outcome, the thing well done, better done than by other men, is the representation of *naïveté*, what we may call the prettiness of gentleness and ignorance —of ignorance in the sense of innocence. The quick sympathetic French nature may be one reason for this; the constant presence of children and old people in the daily life may be another; the exquisite taste which is the national attribute may be another, pointing as it does to the beauty of unaffected graces (much more readily perceived where grace is reduced to a science). Still, the fact is curious and points to the limitation of human endeavours by the unalterable apportionment of human faculty. The greater mass of mankind can but get to a certain point on the high hill of art; only those to whom, as the old fable

says, the gods have given wings, may attain to the shining summit; and though all other wisdom should be ours, it will not help us in this matter. The French are probably the most skilful and ingenious people on the face of the earth, and have from time to time invented the very worst and most inartistic things of which we have any knowledge in modern Europe. For instance, it was to this nation of great warriors, renowned philosophers, and clever women that the idea first came that a crown would look more stately on a periwig, and that the delicacies of millinery would mix with the insignia of royalty. It would however be out of place here to pursue the reflection this anomaly suggests; and besides, it is a somewhat ungracious subject for an Englishman to enlarge upon, seeing that we have as far as lay in our power imitated these fashions for the last hundred years: so we will proceed to examine some of these pictures, taking the well-arranged catalogue as our guide. No. 1, is worthy to head the list, for it is both characteristic and interesting, and belongs to a class of work of which we have no example in England. It may be styled "classic *genre*," and seeks to interest us in classic life, by showing that men and women in those days had much the same manners as ourselves and not (as the great art does) rousing our sympathetic recognition by showing that they had the same passions. Nevertheless it is both a pretty and interesting side of things; and the pictures of Alma-Tadema are capital examples of what may be done. This one, called the "Visit to Delia," is not so good as his other, called "The Honeymoon in the reign of Augustus" (2), which we will notice presently. It represents a morning call at the house of a fashionable beauty, by what are apparently intended for that clique of poets and statesmen of whom Horace sang so pleasantly and sweetly. The expression and character of the heads do not, however, deserve much notice. The painting of the flesh is hot and baked looking, and the hands and feet show none of the high-bred delicacy one wishes to suppose must have characterized the hands and feet of the most luxurious society in bath-loving Rome, where so much time and care was spent upon their adornment. Italian hands also are almost always finely shaped. But the realization of a habitable room in ancient Rome, of the ordinary look and use of the frescoed walls, couches and bronze work, brooches and gold chains, which we generally see only behind the glass of museum cases, is most ingenious and nearly wonderful. How pretty the bronze stove and chaffing-dish, so exquisitely drawn, and beautiful as a ground for the other colours, the black tesseræ of the pavement. The dark blue fan against the lighter blue robe is a charming detail of colour, and the couch is altogether pretty. We have before said that we do not care much about its occupants; the fault in the execution of this picture is that the touches are too hard, and many of the small lights out of tone.

The "Honeymoon" (2), to which we before referred, is in many ways a better picture. It is a good composition, and the drawing is large and fine in style. The colour, though still not good, is much less coarse in the flesh than the other; and the imitation of still-life, besides being of astonishing power, is far more harmonious and in toue. We would point out especially the marvellously, solid, and metallic bronze tub in which the oleander grows, and the beautiful tinting of the white marble seat. Throughout there is to be found beautiful and ingenious arrangements of colour—as the under dress of the woman for instance—and there is some grace in the action of the hands. But we cannot be expected to take much interest in the loves of these mature persons, whose charm must at any period have been a matter of singular personal taste.

"Deer in the Forest of Fontainebleau" (11) is by Rosa Bonheur, and of course is a very good piece of painting. It is, however, a slight work as far as thought is concerned, and has not much original impression. We seem to have met these deer in a good many pictures before. The fawn looking round the group is very good, however, and has something new in its wild, obstinate, fierce eyes. In all the works of this gifted artist we see real mastery. The beauties are chosen, and so are faults. There is no hesitation in the broad touch which sweeps out a thousand delicacies, and attains solidity and relief. The painting of the ferns should be compared with those by some of our English painters, to estimate rightly what has been sacrificed, and what gained. We do not much like the tone of the sky in this picture, which, for the rest, has so much of the impression of the Fontainebleau scenery that every one seems to recognize the exact spot.

"Fast Asleep," by Bonnat (13), is a strongly-painted little picture of a child, in an Italian costume, asleep upon a bank by the wayside. It is evidently a study, but so good, both in feeling and execution, as to make it the more regrettable that the painter should have tendered as a background, a smear of dirty colour which takes all light and reality out of what would otherwise have been a charming work. Again, we wonder how it is that in France where there is so much pleasant sunlight, sunlight is banished from pictures.

"The Authoress," by Bisschop (17), seems virtuously conscious of her interesting occupation, and we feel sure she is writing some good little sentimental book fit for good people at Amsterdam. She is very well painted, however, and the colour of the old red desk, perhaps more choice and luminous than anything in the room.

"The Signal" and "Le Jeu de l'Orca," by Coomans (28 and 29). It is fortunate for English Art that two such elaborately bad pictures are almost impossible in our school; for they must have taken some time to do, besides some knowledge and practice as well as prepensity of thought and associations. And the absence of a market in England for such affectations would have mercifully preserved any one inclined to them from acquiring the skill necessary for their production. We speak so strongly because it is possible that the *prettiness* of the subject may mislead some careless observer into a certain complacency when looking at worthless performances, where everything is as untrue as it is *fade* and stupid. "The Little Boy washing his Feet in the House Fountain" (29) is the only really graceful thing in them, and that is taken from the antique. Nos. 34 and 35, by Caraud, are also bad, though the subjects are full of interest. One can scarcely paint the gardens of Le petit Trianon with a figure more or less like Marie Antoinette without attaining some interest, but here the interest stops with the first glance—the vacant face of the queen, and the cindery, sunless garden invite no further examination. As to Louis XVI. making locks, one only thinks it was a very good occupation for him, not without wonder how he managed to learn to do it.

We may speak of "Church-time" (53), by M. Albert de Vriendt, and of (54) "The Return of the Crusader Guillebert de Lannoy from the Holy Land, who relates his adventures to Isabella of Portugal, Duchess of Burguudy," by Julien de Vrieudt, as if they were by the same artist, so much are they alike in sentiments and point of view. M. Julien de Vriendt is, however, much more skilful than his namesake. They both seem to be pupils or imitators of the great Belgian artist Leys, that splendid colourist who has found his field in the pageantry of mediæval life, but who, by his profound and serene expression, always holds to the great Art. But his very greatness makes him a dangerous guide to weak men. His ideal treatment betrays them to phantoms and lay figures, and his knowledge of colour gives them a terrible power over blue and red. There is something of mania in these works. "Church-time" has all the manner of the school, but, alas! none of the matter. Two very dull-looking ladies in very fine dresses appear to be going with reluctance into a Gothic Church. A nun pulls a bell-rope with provoking assiduity. And we can no longer wonder at the Reformation if this is in auywise a true presentment of the religious observances of the middle ages. The other picture is really pathetic. Poor Isabella of Portugal is there represented, shut up in a sort of Gothic pew with an ineffably dreary-looking Crusader bent upon telling his story, while her attendants and subjects contemplate her dreadful fate, through the bars, with terror and dismay. One sees that she will yawn in a minute; there is no help for her, and Guillebert de Lannoy will go on. It is already sun-set, but they will light lamps presently. Whoso has heard a military story knows that it may not be averted.

If she might sleep, it were well; but Isabella of Portugal must be worthy of her ancestry, and sit bolt upright to the end of the tale. She has a beautiful gold dress, however, and the Crusader is as like a bore of the fifteenth century as we can imagine.

Nos. 73, 74, and 75 are the work of one of the completest geniuses that France has produced—Edouard Frère. We say completest, because we think that in his works may be traced that harmony between his most spontaneous sympathies and his aim in art, which makes us recognize them as expressions of true emotions—not perhaps of the greatest, but still the emotions of a living mind. Nothing in his pictures in any way contradicts or disturbs the dominant sentiment. The very absence of great qualities in the drawing and colour adds to their gentle humanity. One is with an equal, as it were, and willing to be pleased with simple pleasant things. All ideas of strife and the pride of emulation are forgotten, looking upon these artless, tender paintings, with their hesitating touch and half-understood effects. We may well forgive him his black shadows, when he gives us expression so subtile and gracious to think of, as he has in "The Reprimand" and "The Invalid Doll" (73 and 74). In "The Reprimand" we see two little bodies who have been getting into trouble, committing some of the crime of such wee folk—letting out the calves or chasing the ducks, or, with many deep-laid plots, creeping through the hedge to where the ripening peaches make the garden sacred—perhaps even scuffling with their little round fists, in which case, we venture to say that the combat was not a very fierce one, and after the adjudication of the wonderful old grandfather, who sits at home all day in the shadowy house, they will trot off into the sunlight again, hand in hand. For, you see, these two have been toddling about all the summer day. The little lad stands sturdy and tired, hot from the sun, the collar of his blouse thrown back from his tender brown throat, and his eyes still half dazzled with the light, and the chubby, gentle little woman, who has crept to her well-known refuge at the old man's knee, is already getting drowsy, partly with compunction and partly with rest. The old man is a kindly, punctilious old fellow, quite earnest and particular about the misdeeds of these two minute culprits. It is impossible to express how much there is of tenderness and deep sympathy in this picture, which, while recognizing its shortcomings as a painting, we would rather have than almost any in the Gallery. "The Invalid Doll" (74) has much of the same excelleuce, but 75, called "Leaving School," is by no means, to our thinking, a successful effort. It is a large picture, and the defective workmanship tells more unfortunately; and again, it is a picture of strong action, which is not the forte of the artist. It represents a troop of boys rushing out of school into the grey, snowy air, some tumbling dowu the steps, some making slides in the frozen gutter, some throwing snowballs; all "the business" (to borrow a word from the theatre) is there, but they are not boys. They are too much alike, in the first place, and all good boys: they lack animal intensity, the busy eagerness of mischief, in their waywardness—lacking the loyal humble admiration of the weak for the strong, by the utterly absurd merriment which is the privilege of their age. Nor can we find much attempt to render the beauty of lythe young forms, bright eyes, and curly heads, yet this picture has the merit which genius alone can confer—it is equally free from affectation and false excitement as from coarseness and common-place.

"Art and Liberty" (80) is by Gallait, one of the most admired and successful of modern painters. For ourselves, we have never put this accomplished artist among the first: he seems to us to have all sorts of knowledge and no intuition; he kuows all about anatomy and heraldry; archæology and expression; the proper things to group to tell his story, and all about paints and mediums, but he does not seem to us to have any special gift of expressing all this knowledge. The clean, bright painting of this picture would be enviable to a scholar, but not to a master. The sentiment is appropriate, but affects us as little as the accuracy of a sermon or prize poem. Everything is well and scientifically drawn, but without fire or sense of movement. Albert Dürer has the noble, but rather helpless air of a tenor hero at the opera. But it is so thankless a task to point out the shortcomings of what has at all events been competently done, that we will say no more.

"Louis XIV. and Molière" (82), by Gérôme, is undoubtedly very fine. The superiority of the design and arrangement of colour to the execution shows, however, that it is a duplicate work; while the expressions are very subtile in intention, but not carried out as finely as they no doubt are in the larger picture, which is now exhibited at Paris. The faces of the king and Molière, for instance, are rather blurred, and the eyes of all the personages want vivacity. The cardinal is the best figure, though somewhat coarse as an expression of priestly arrogance. The colour of his violet robe makes a charming harmony with the white and gold of the room. It is always a great advantage to an artist when his subject allows him to people an existing scene with interesting or historic personages; and there is no doubt that this picture has gained immensely in reality from the fact that the king's room at Versailles looks now almost exactly as it did when the great Louis might be expected to enter it at any moment. In creating ghosts a good solid array of facts are invaluable. The painting of velvets, and gold, and court splendour in this picture is most remarkable—it is not noble and triumphant, as it would have been in a Venetian work, but it is in rare good taste—it is French, in fact.

THE TWO WATER-COLOUR SOCIETIES.

THE new society, or, as it is now called, "The Institute of Painters in Water-Colours," has given this year a lesson to all our societies connected with the Fine Arts, by electing foreigu honorary members. All learned societies and academies in every part of the world elect men of celebrity belonging to other countries. This practice should have been carried out by the Royal Academy, and no doubt but it would have been followed. But the honour of giving this worthy example has been seized by the Institute, and they have elected Rosa Bonheur, Henriette Brown, Meissonier, Gallait, and Madou. Rosa Bonheur exhibits "A Highland Lake" (52). It was only lately that this gifted lady made her first attempt at water-colours; during a visit to this country she was so struck with the qualities produced by the English school of water-colours, that she was tempted to try her hand, and the picture here exhibited is one of her first efforts. The technical qualities produced by washing and various other processes have not been carried out to any extent, but the sheep and the figures iu the boat are most beautifully done. Mr. Gallait's works are small copies of two of his large historical pictures—"The Warrant of Execution read to Counts Egmont and Horne" (49) and the "Oath of Vargas" (55). Mr. Gallait's power of correct and careful drawing is here seen; it is as thoroughly carried out as in his large pictures. One of the principal pictures in the French section of the International Exhibition of 1862 was by Henriette Brown, of two Sisters of Charity nursing a sick child. She sends a similar subject to this gallery; and we hope that she, as well as the other honorary members, will continue to favour us in future years with further contributions. E. G. Warren has left his corn-fields and beech-trees and gone to the coast, from which he sends "The Battle of the Waters" (226); a wild, stormy picture, with the wind almost visible in it. The

scattered fragments of wreck look like the slain of the battle-field, and they tell how fierce the shock has been; the masses of rock have been very carefully studied. Mr. Haghe, the vice-president, is well represented this year. His principal contribution is a pair of very fine drawings, to which he has given the appropriate titles of "Lawless Times" (223) and "Peaceful Times" (234). The last of these is "Cavaliere d'Arpino Painting the Frescoes in the Cloisters of the Convent of St. Onofrio, Rome." The feeling of peace and repose could not have been better suggested than it is by this quiet cloister and its pious inhabitants, who have left the strife and struggle of the world to end their days in the shade of this retreat. The decoration of the place by the Cavaliere—the incident selected by Mr. Haghe—also helps to confirm the title of the picture; for the cultivation of Art—and all human cultivation as well—can only advance for the benefit of man in peaceful times. The other picture tells its story equally well. A lawless and armed band have entered a house which, from its architecture, might be an Italian villa. Its inhabitants are defending themselves as best they may: and although succour is seen coming, yet the spectator is left in fear for the result to the lives of those attacked. The action and painting in the figures of this picture are admirable, and the grey tones of the architecture display Mr. Haghe's peculiar *forte*. Carl Werner's Egyptian subjects are very successful this year. Out of the many which he exhibits, the first we come to in the catalogue (22) is a very good illustration of Mr. Werner's powers; he draws carefully, is almost photographic in detail, effective and powerful in light and shade, and rich in colour—all qualities of the highest value to such drawings. Mr. Tidey gives four large and well-drawn illustrations of the four seasons. "The French Advocate for Woman's Rights" (82) is a happy title; the advocate seems as strong-limbed as she seems strong-minded. Mr. Hine has taken possession of the Downs, and made them quite his own. What soft lovely greys he gets over the simple outlines of this geological formation. "On the Downs near Folkington, Sussex," (310) is a good specimen of his powers. Mr. Hine is equally fond of the beach, where he likes to study cliffs, rocks, boats, sea-weeds, and oyster-pots, &c. "Coast near Beachy Head" (204) is a highly successful effort. "Nuremberg" (70) by Skinner Prout,—

> "Quaint old town of toil and traffic,
> Quaint old town of art and song,
> Memories haunt thy pointed gables
> Like the rooks that round them throng."

This is about as good a picture as Mr. Prout ever produced—a busy scene brightly painted. "Waiting for the Pantomime" (295), by G. Green, is full of capital character and drawing. "In the Plaza de Toros, Seville" (196), by W. W. Deane, is a picture showing great advancement; small as the face of the queen is, the likeness is evident. Mr. Penley, who contributes such able articles upon painting to this periodical, is strongly represented by a large number of drawings painted in his best style. We most cordially advise his readers to go and see for themselves how well, and with what good effect Mr. Penley carries out the instructions which he gives to others. Space will not permit a further notice of many most meritorious works in this exhibition.

In the Old Water-colour Room, one of the first pictures which attracts notice is Carl Haag's "Happiness in the Desert" (417). It is one of the very best works Mr. Haag has yet done; the shadow of the camel from the sun and moon—both faint, the one dying and the other coming into existence, each neutralizing the other—is a particularly fine feature in this picture. If happiness is to be got in riches, the reported price of this picture would indicate that Mr. Haag can find "Happiness in the Desert" as well as the Arab family he has so wonderfully represented. Alfred W. Hunt wants the great range and power of Turner; but there is almost no man of the present day who can get some of that great painter's qualities of aërial grays, flickering softness, light, and colour without muddiness or blackness. Still one cannot help wondering at such a title as "November 11th, One o'Clock p.m." (16). It reminds one of the inimitable parody which Professor Aytoun, under the name of "Mr. Dusky," made upon Ruskin's style of writing; in fact, one of Mr. Dusky's criticisms was upon a picture which he at first thought represented a scene under the conditions of effect which would indicate that the hour of the day must be "two o'clock p.m.;" but a more minute inspection made it clear that this was an error, and that the true time represented was twenty-three minutes past two p.m. This was out-Ruskining Ruskin, and Mr. Hunt's title has a very strong resemblance to it. At the same time it must be confessed that it is a very wonderful picture. The clearness and brightness of effect is unrivalled in the room. So fine is the work of every part, that one cannot help regretting that the foreground had not been differently treated: it looks like a child's work; it is poor and unfinished. Compare it with the foreground of "Durham, from Pelaw Wood" (258), by the same artist, and it will be seen that he can give force and effect to that part of his picture. This last will rank, and that with great advantage too, beside Birket Foster's "York" (263). Fine as Foster is at foliage, he would find it difficult to go beyond the group of trees in Hunt's picture. "The Old Breakwater" (150) and "Old Shoreham Bridge" (156) are about the finest works which Mr. Foster has ever exhibited. T. R. Lamont's two pictures are well drawn, but there is a scratchy look about them which, were it got quit of, would greatly improve the effect. "The Puerta de la Sangre, Toledo" (92), by E. A. Goodall, is a very good drawing. Most people will very naturally be pleased with the title and the subject chosen by Mr. Bradley, namely, "The Happy Mother" (201).

"Crimea—Sounding a Retreat" (71), by Frederick F. Shields, is well drawn and painted; it is no fancy picture, but very real in its character. The bugler belongs to the 97th, and it is scarcely fair to any regiment to select it as an example of retreat. The 97th did retreat from the Redan; but it was with no dishonour. They were the first who entered that work, although their colonel and major fell, the one mortally wounded, and the other dead, in the attack.

There are a great many works in this exhibition whose quality and character scarcely require to be noticed; such as John Gilbert, T. M. Richardson, Frederick Tayler, E. Duncan, James Holland, &c. &c., whose reputation we are all agreed upon; but a new man has lately appeared among them, about whose powers there is the very widest possible difference of opinion. According to his admirers, his pictures are about the only works which can be called art in the present day: in fact, art is not the word, they are shrines at which to worship, and the artist is a prophet, or at least a canonized saint. With others this admiration seems one of the greatest delusions of the time; they are lost in wonder at the bare idea of such works being even included under the term pictures. Believers in Spiritualism, the Davenport Brothers, Mrs. Thwaites, or Mr. Burne Jones, would seem to some to be equally ridiculous. Here are High and Low Church in art. Here are the extremes; and who is to decide? Well may the outer world doubt all rules of criticism when they find artists themselves so wide in their judgments. Mr. Burne Jones's works are certainly curious productions; and it is said that the members of the Society were very much astonished at themselves when they first saw his works upon their walls. Possibly there is a certain want in modern art, and it is too much made up of light and shade, drawing and composition, mechanical power and dexterity; possibly it altogether wants the higher and more spiritual qualities of relationship to man's moral and religious nature. Mr. Jones does make an attempt at these higher attributes, and the devotion of his ardent and worshipping admirers may be interpreted as a protest against their absence from modern art. Whether he has attained them, or will be the star of a new school, or not, we will not try to decide; time itself will make the point clear.

REVIEWS.

Rough Notes by an Old Soldier during Fifty Years' Service, from Ensign G. B., to Major-General, C.B. London: Day & Son, Limited.

THESE two volumes contain the record of a thorough soldier's life; vigorously, clearly, and simply narrated. It appears almost marvellous that their author can have come unscathed through the numerous perils which he recounts. He seems to have walked through life over red-hot plough-shares, as it were, of battles, tempests, and pestilences. In fact, this autobiography of Major-General George Bell, C.B., conveys a most vivid impression of the exceedingly active service entailed upon our soldiers by our numerous and distant dependencies. In 1811, the author having obtained an ensigncy in the 34th Regiment of the Line, assumed the cocked hat and feather, jack boots, and white breeches of the period. During the next three years he was engaged in the thick of the fighting in the Peninsula. Among the battles and sieges which he describes, the storming of Badajoz stands prominently forth as a splendid instance of the indomitable valour of the British soldier. The story has been told before, but it is worth re-telling in its magnificence of horror. "Here now," writes our author, "was a crushing and most desperate struggle for the prize; the bright beams of the moon were obscured with powder smoke—the springing of mines, powder barrels, flashing of guns and small arms, rendered our men marks for destruction—death's grasp was just on the remnant of the brave, a total annihilation of humanity on our side, when the troops who had escaladed the castle made a dash at the breach, and with one loud cheer for England, and a sweeping volley, and another mad shrieking yell, rushed on with the bayonet, and cleared the bloody gap for those below, who now rushed in, driving the French from every point—and Badajoz was won." But unfortunately he is compelled to state afterwards how this courage was tarnished.—"For two days the town was in possession of the victorious, and it may be as well to draw a veil over the misdeeds of men stained with the blood of their comrades." He ascribes much of the carnage to the neglect of the Government in providing the army with proper besieging tools. Indeed it is lamentable to read that troops, displaying such devotion, were constantly suffering from insufficiency of food, clothing, and the munitions of war. The recital of these miseries evokes, as we may imagine, the grand old shade of Picton and the following familiar receipt for dealing with the red-tape worm:—

"Sir Thomas Picton told his commissary one day, that if he did not find rations for his men, he would hang him on a tree. The commissary became very indignant at this insult (as he termed it), and went off to Lord Wellington to complain. After hearing the whole story with wonderful complaisance, he said, 'Did Sir Thomas really say so?' 'Yes, my lord, those were his very words.' 'Very well, you had better get the rations, or you may be sure he will keep his word. I can do nothing for you: good morning.' The commissary returned and found the rations for his brigade."

We renew our acquaintance, in the Peninsula, with Maurice Quill, the witty doctor, one of Lever's delightful characters; and we are presented with many pleasant sketches of Spanish life, besides the stirring accounts of assaults, charges, marches, and bivouacs. Subsequently the General served for many years in the East Indies, enduring all the annoyances of flies, fever, mosquitoes, and thermometers at 130°. He was ordered to "Rangoon, with its 3,000 pagodas, its stockade, shipping, war boats, high and towering talipat and cocoa trees, Poonghee houses, and the great burnished temple topping all, and standing in the midst of this forest of fairy-like land of enchantment"—to fight the Burmese. He was next exposed for seven years to the extreme of cold in Canada, where he distinguished himself in the suppression of the rebellion. He then returned to the fierce sunshine of a West India station, where he observes "the grave-yard was under the men's windows, a very remarkable and interesting view, and well chosen by the authorities to keep invalids in remembrance that the garrison was deposited there every seven years." Such was the spirit of this old soldier that in 1854, after forty-two years' service, he could not rest content with the command of his regiment at serene Cephalonia, but applied for and obtained the 1st battalion of the Royals, under orders for active service in the East. The scene presently changes to the Crimea, and here stories which we have heard before, but which come fresh to us in all their abomination, make us wish for Sir Thomas Picton, his tree, and a coil of stout red tape. We read of

"Men in the trenches twenty-four hours at a time, soaked to the skin; no change when they came up to their miserable tents, hardly a twig now to be got to boil their bit of salt pork; short of rations, too, for want of transport; everything cheerless, the sick lie down to die in peace in the miry clay, they have no energy left. Thousands might have been saved but for the red tape."

Again, "A ration of green, raw coffee berry was served out to the men and officers; a mockery in the midst of all their misery; nothing to roast coffee, nothing to grind it." "Inspected the brigade. Found the men in tatters, but their powder dry; their old clothes tied about their half-naked frames, and old knapsacks bound about their legs." "We seldom see any of the red tapists in our camp." * * * "I proposed, when there was some snow on the ground, to put runners on the *arabas* in the sleigh fashion, and get up provisions from Balaclava, a simple matter, and easily accomplished. Oh! no; it did not emanate from the proper quarter, and was poohpooed; I was a meddler, and so on. In three days the camp might have been amply supplied with abundance of stores from that wretched Balaclava." Besides the narrative of his campaigns, the author gives interesting accounts of numerous journeys, which he has undertaken for his own pleasure, to Rome, Naples, Athens, and other places. Altogether, from the variety of the scenes, and strong interest of the incidents through which he carries us, the book can scarcely fail to be entertaining as well as instructive. Written by a soldier as gallant, as successful, and, if it be a necessary qualification, as old as themselves, it seems to us just the work that the military hierarchy who are so insolently intolerant of civilian suggestion might find an excuse for reading and inwardly digesting—so that the experiences of the Peninsula and Crimea may not be lost, in the event of England being unhappily plunged into another European war. In a few years we may have forgotten the warning which impressed us so deeply when we were first made acquainted with the mismanagement of matters in the last war.

Proofs in Support of Lieut.-Col. Richards' Claims as chief Promoter and Originator of the Volunteer Movement of 1859. Swift & Co., London.

MOST people probably consider, without bestowing much thought upon the matter, that our unpaid army arose from a spontaneous ebullition of national ardour, evoked by the exigencies of the period. Many are, perhaps, glad to forget sinister prognostications and ridicule thrown upon the movement at its outset, and the doubts, very frequently expressed, whether men would turn, at stated periods and by beat of drum, from their offices, counters, or farms, to gird bayonets upon their thighs and to shoulder rifles. It was a common observation that, even if the youth to whom the promoters of the movement addressed them-

selves should be discovered to possess such an amount of martial energy, the figure they would cut in military array would be rather mirth-inspiring than soldierly. In fact, ten years ago, hardly the boldest ventured to predict permanency for the institution of volunteering in time of peace.

The pamphlet before us has been written to urge the appropriateness of an expression of national gratitude to Lieut.-Col. Alfred B. Richards, on his retirement from an active command in the force. It asserts that "to Colonel Richards is due the merit of having practically initiated the movement in the face of discouragement and difficulty which would have daunted and silenced a man less devoted to the cause which he had taken in hand," and therefore invites "the nation, and especially the volunteers, whom he has done so much to call into existence, to respond to this appeal to their patriotic gratitude as Englishmen." Here we find how one man, patiently struggling against ridicule or passive acquiescence, found means to ventilate, through the press and otherwise, his propositions, that the volunteer corps should be organized and drilled throughout the United Kingdom, and that, although we were styled a nation of shopkeepers, our ancient military spirit still existed. In the spring of 1859, Colonel Richards persuaded, not without difficulty, Admiral Sir Charles Napier to preside at a meeting convened in St. Martin's Hall. That meeting crowned the enthusiast's work. The speeches uttered at it were endorsed by the press, and found an echo in the hearts of the people of England; and in twenty-six days a War Office circular gave the people's army an official existence. We agree with the author, after perusing the ample evidence adduced in his pamphlet, that this effect can be justly ascribed to his hero, and to his hero only, and our acquiescence follows in his claim that such eminent service demands public and positive recognition.

MUSIC AT HOME.

THE huge vessel commanded by Manager Mapleson slipped its moorings, and commenced the perilous voyage of 1867, to the flourish of many brazen trumpets in Verdi's *I Lombardi*. Signor Verdi himself has taught us to believe in better things than those contained in this musical story of the Crusades; and *I Lombardi*, in the present year of grace, is somewhat disappointing to all infatuated people who quail at the crash of super-abundant brass, and sigh for gentler strains. The opera is chiefly remembered through the air "La mia letizia" for the tenor, Oracte. On the opening nights of the season Mr. Tom Hohler deputized for Signor Mongini. The great feature of the cast is Mr. Santley's Pagano, a magnificent performance both as regards singing and acting. *Le Nozze di Figaro* has, of course, been again brought forward with a Cherubino neither so good nor so bad as some of her predecessors in the part. Madame Demeric Lablache is perhaps grateful for many kind things said about her by members of the fourth estate; but she can hardly have appreciated a delicate attention paid her by a morning luminary, on Monday, May 20th. Referring to a representation of *Lucrezia Borgia*, on the previous Saturday, the friend to truth and the conscientious critic admitted a certain "piquancy" in Madame Demeric Lablache's Orsini, next stated as his deliberate opinion, that the piquancy aforesaid "was somewhat overstrained," and concluded his reliable criticism with the declaration that the overstrained piquancy was approved of by the audience. Unfortunately for the censor's veracity, Madame Demeric Lablache *did not play the part* on that particular evening. She, perhaps, would have given London exactly the Maffeo the commentator saw in his mind's eye; but Madame Trebelli Bettini stood in the way, and overturned all the pleasant theory advanced by the critic who so unhappily deceived himself in trying to enlighten others. On the night alluded to, Madame Giacconi, a new Lucrezia Borgia, was introduced to the London public. The lady came, and saw, but did not conquer; for the British lion is an animal of strong prejudices, and refuses to acknowledge the merits of a Lucrezia with a comparatively weak voice, and with a superlatively weak idea of acting. It was hardly probable that another great, or even notably good, representative of the terrible Duchess would be allowed, if able, to divide such honours with Titiens the magnificent. Herr Rokitansky is not so good a Falstaff as he is a Marcello; but he is a genuine artist, and has a magnificent bass voice.

Operatic London must have its "pet" or "pets," and that one huge shell will hold two sweet kernels is tolerably evident at the Royal Italian Opera, where Mdlles. Adelina Patti, and Pauline Lucca exercise most despotic rule. The former is again triumphant, as Rosina in *Il Barbiere di Seviglia*, and on the night of her re-appearance was invited, more cordially than ever, to tread upon the neck of the prostrate public. Neither real nor comparative novelty is yet the order of the day at Covent Garden.

Euterpe has gained a new home in Langham Place, and lost an old one in Long Acre. St. George's Hall, the peculiar and chosen resting place of the new Philharmonic Society is both commodious and admirably adopted for musicial purposes. Dr. Wylde is evidently no Tory in matters of art, for the welkin of St. George's has already rung to songs made popular in Music Halls. The home to be henceforth reckoned among the things that were, is St. Martin's Hall, which will be converted into a theatre, and opened to the public before the next Pantomime season. In this gloomy, cold, and depressing apartment, Madame Lemmens-Sherrington made, if we remember truly, her first appearance as a concert vocalist, in the time of the Hullah Class celebrations. Through various vicissitudes has the building passed, fire being the greatest, and Masquerades, Amateur Performances, Japanese ditto, Aztec ditto, and political meetings the least.

The Grand Opera Concerts, at the Crystal Palace, are in progress, and at the first of them Signor Bottesini went through the ordeal of playing a Tarantelle of his own, with the same chance of making it heard, that he would have on Hampstead Heath. To all but those immediately at hand, the Tarantelle was literally a sealed book, and a profound secret. For the first and second concerts the vocalists were from the Royal Italian Opera; and for the third, from Her Majesty's.

Miscellaneous concerts, both morning and evening, are announced on all sides; and from the mass of gaslight entertainments may be selected for very honourable mention, that given by Mr. C. I. Hargitt, at St. George's Hall, early in May. Mr. Hargitt brought forward some of the earlier works of Beethoven, and deserves the thanks of connoisseurs for so doing. Miss Madeline Schiller, a few nights afterwards, tendered her contribution to the fashionable concert season, and played Chopin's fanciful Polonaise in E flat delightfully. Miss Schiller is not yet a great player, in the sense of the word, but she has the wherewithal to make her one, and is endowed with a marvellously delicate touch—when she chooses to proclaim the fact. A slight tendency to exaggeration, both of tone and sentiment, is now the only blemish upon this singularly-gifted young lady's playing. Miss Schiller must have been greatly edified with the statement made in a daily paper as to her having performed a solo by Stephen Heller as an encore, when the piece in question was Weber's Rondo, "Il Moto Continuo."

CLARKSON STANFIELD, R.A.

IT is sad, perhaps ominous, to close our number with an obituary notice; but the passing away of so thorough a British workman as Clarkson Stanfield demands one from every fine-art-professing periodical. This much-loved gentleman died on the 18th of May, in his seventy-fourth year, full of years and honours, and we may almost say in harness, after a long season of merited popularity. He was a sea boy, and it were superfluous to say more of his marine works than that they have for more than a quarter of a century been the delight of his countrymen and an honour to the Academy which, indeed, adopted him some time after the million had set their mark of approval upon him. The commonalty of the Far East and the New Cut had bestowed their sweet-voiced tributes of joy and thanks upon Mr. Stanfield for some years before the *dilettanti* of the British Institution voted him prizes, or the Royal Academy annexed him. He was painter to the Coburg theatre in 1822, and there illustrated the spectacular pieces which made that play-house famous, and the "transpontine drama" an institution and a bye-word. The next year he painted the scenery for the Drury Lane pantomime, entitled "Harlequin and the Flying Chest." In 1824 he revelled in the sensational scenery demanded by "Der Freyschutz," and it is in the memory of old playgoers and professionals that his "Wolf's Glen," a "set piece" constructed with all the advantages at the disposal of the Drury Lane stage, was a remarkable and most successful effort. In 1825 Stanfield began a series of dioramas, which formed for many years as necessary and popular a feature of the Christmas pantomimes as are the transformation scenes of our own period; and we are disposed to think that the beautiful cloths on which the future academician displayed some of his finest fancies were far more artistic, if not so terrible, as the chemico-engineering triumphs of lime-lighted stage carpentry for which our pits and galleries annually award to Messrs. Beverley, Cormack, Slowman, and others their much-desired ovations. Even now we remember with pleasure one of these dioramas. It figured the progress from her cradle of a man of war, and Stanfield, of course, threw himself heartily into the work. We seem as we write to hear the deafening shouts of delight as the pictures followed each other across the Proscenium. We can fancy, too, how Stanfield must have treated Windsor Castle and Park in one year; Alpine passes in another; the Backwoods and Niagara in another; but facts and memory help us when we have to speak of the glories of "King Arthur" in 1833, for it was on the occasion of our first visit to a play and to the then three-and-sixpenny pit of Drury Lane that "His Majesty's Servants" enacted to our delight "The King's Seal," "The King's Word," and "King Arthur." The bill is before us now—a thrice royal programme never repeated. About this time he was working for the Sutherland family on a noble series of Italian scenes which ornament their great house at Trentham. He was made an associate of the Royal Academy in 1832, and member in 1835. His career as a scene painter was not, however, terminated by his absorption into the Academy; for we remember well how he assisted the Covent Gardeu manager Macready in a grand spectacular edition of Henry V., in 1839, with the beautiful works "Before and after Agincourt." In 1842, his last theatrical triumph was the "Acis and Galatea," scenery which he painted for the then director of Drury Lane, and which truly took the town by storm. Since that period Stanfield's name has been familiar to the thousands who have annually flocked round his beautiful canvases on the walls of the Academy. When we mention "The Battle of Ischia," "The Day after the Wreck," "French Troops crossing the Magra"—an episode of the first campaign in Italy; "The Battle of Roveredo," "The Abandoned," "Wind against Tide," "The *Victory* towed into Gibraltar after the Battle of Trafalgar," "The Siege of St. Sebastian," and "The Bass Rock," we name but a few. There is, of course, not a collector of any importance in the country who has not if possible acquired a Stanfield; and where the Stanfield is, it may always be observed to be in a place of honour. His "Skirmish off Heligoland" (No. 199 in the present year's exhibition of the Royal Academy), a picture full of atmosphere, and painted with unrivalled delicacy, is evidence that the master's faculty was strong to the last; and it is to be hoped that ere long our National Collection at Charing Cross will be enriched by some specimens of this admirable marine painter, if they be only to rauge with those by the gigantic Turner which already figure there.

OLLA PODRIDA.

WORK AND PLAY.—If there be an aggravating incident in this very trying world, it is assuredly that of being mounted on a non-progressive donkey, unarmed with any available whip, stick, spur, or other instrument of cruelty, and wholly at the mercy of a treacherous conductor, who pretends to belabour your beast, and only makes him kick, and keeps you behiud your party, when you have every reason in the world to wish to retain your place in it. Only one thing is worse; a mule which carries you through a whole day of weary Alpine climbing, just too far from all your friends to exchange more than a scream at intervals. If there chance on such an excursion to be ten pleasant people of your party, and one unpleasant one, whom you particularly wish neither to follow nor seem to follow, it is inevitably that particular, objectiouable person whose mule your mule will go after, and press past every one else to get at, and drag your arm out of its socket if you try to turn it back, and finally make you wish that an avalanche would fall and bury you and the demon-brute you have got under you in the abyss for ever. On horse-back you are a lord (or lady) of creation, with the lower animal subject unto you. On mule-back, or ass-back, you are a bale of goods, borne with contumely at the will of the vilest of beasts; not where you please, but where, when, and how *it* pleases. —*Hours of Work and Play*, by Frances Power Cobbe.

THE HUMOUR OF VARIOUS NATIONS.—There are three classes of people in society,—those who *radiate* spirits, those who *reflect* spirits, and those who *absorb* spirits. The Radiators are few, the Reflectors sufficiently numerous, but the Absorbents, alas! nearly enough to balance them both. The height of the thermometer of cheerfulness at any social gathering might be predicted beforehand by any one who should carefully estimate the numbers of the guests to be ranked under these respective classes. Are there uo Radiaters? Theu it is as useless to gather Reflectors as to fill a room with mirrors and expect them to be bright without the introduction of lamps. Are there two or three Radiators? Then Reflectors may be multiplied with advantage, almost *ad infinitum*; and even a limited number of Absorbents, carefully stowed away in corners, will not do much harm; but this must be managed with caution, for even the brightest of Radiators placed at dinner between two Absorbents, will often fade away, and merely "twinkle, twinkle," like a very "little star" indeed, for the rest of the evening.—*Ibid.*